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INTERLINK VIDEOTEX ON THE APPLE // RANGE.

SYSTEM REQUIREMENTS:

1. Apple //e, //c, //+ and Europlus.
2. Monochrome monitor.
3. Disk drive and controller*.
4. 1200/75bps manual modem.
5. INTERLINK or Super Serial communications card*.

OPTIONAL:

1. Epson parallel printer and printer card*.

*Not required when using an Apple //c.

INSTALLING THE HARDWARE. Install the hardware as described in the manuals provided with the hardware.

BOOTING THE VIDEOTEX DISK. Upon booting the disk a cursor will briefly appear in the bottom left hand area of the screen followed by an animated INTERLINK title page. For convenience the INTERLINK title page may be by-passed by pressing the ESCAPE key when the first cursor appears during the *initial* boot up procedure.

You should now see the first menu:

- <1> STANDARD VIDEOTEX RECEIVER
 - <2> CONFIGURE FONT TYPE
 - <3> QUIT
- SELECT < >

INTERLINK CONFIGURING THE SOFTWARE

BEFORE RUNNING THE SOFTWARE it must be configured to enable the software to know:

1. The *model of the computer.
2. The type of serial card.
3. The slot number of serial card.

*When selecting an Apple //c the type of serial card and slot number is automatically defined.

TO CONFIGURE THE SOFTWARE select <1> from the boot-up menu shown on the previous page. The following main menu will then be displayed:

- <1> RECEIVE VIDEOTEX DATA.
- <2> RECALL PAGE.
- <3> RECALL PAGE AND PRINT.
- <4> CONFIGURE SYSTEM.
- <5> CATALOG DISK.
- <6> QUIT.

Upon selecting option <4> the following configure menu will appear:

CONFIGURE:-

- <1> COMMUNICATIONS CARD
- <2> AUTOSEND I.D. CODES
- <3> KEYBOARD

SELECT < >

To configure the software for the communication card select prompt "<1>" from the CONFIGURE menu. Then enter the prompt preceding the type of card that you are using.

INTERLINK CONFIGURING THE SOFTWARE cont'd

Important: if using a super serial card:

1. Switch number 2-6, that is switch six on the second switch bank must be in the ON position.
2. The jumper block on the card must be orientated to face the modem position.
3. When using an INTERLINK manual modem, pin 5 (5=CTS) of the modem end of the serial lead must be disconnected.

Next when asked if there are any further changes enter "Y". Now enter prompt "<5>" CHANGE SLOT ASSIGNMENT and enter the slot number of the serial card.

PROGRAMMING AUTO SEND I.D. CODES. Upon entering option <2> from the CONFIGURE menu you are permitted to enter up to six ID codes each containing a maximum of sixteen characters. When programming I.D. codes, first define the prompt number that you want to work with, then enter the I.D. code and press return.

CONFIGURING THE KEYBOARD Upon entering option <3> from the CONFIGURE menu you are able to configure the keyboard to transmit specific characters required by the Viatel system. Upon selecting this option an explanation is provided on the screen.

Entering "N" in response to the prompt enquiring if there are any further changes will take you into the main menu.

CONFIGURING FONT TYPES Option <2> from the boot-up menu permits you to configure the keyboard to transmit those alpha-numeric characters used by any one of the six countries listed.

INTERLINK RECEIVING VIDEOTEX

RECEIVING VIDEOTEX Upon selecting option <1> from the main menu you will enter directly in to the receive mode. From the receive mode you must establish a connection with the Videotex data base in the manner described in your modem manual. All incoming data will now be displayed on the screen. (To return to the main menu press ESCAPE.)

AUTOMATIC TRANSMISSION OF I.D. CODES is achieved from within the receive mode by pressing the "CONTROL & A" keys together. Release these keys then enter the prompt number preceding the desired ID code (a number from 1 to 6).

RECALL PAGE Upon selecting option <2> you are asked the name of the page (FILENAME) and drive number that contains the disk on which the file is stored. Upon locating the desired file the page is displayed. To return to the main menu press ESCAPE.

RECALL PAGE AND PRINT Upon selecting option <3> you are asked the name of the page (FILENAME) to be printed and drive number that contains the disk on which the file is stored. Upon locating the desired file the page is displayed. Press any key and a graphic dump will be sent to your printer. On completing the printout the programme will return to the main menu.

NOTE: This print routine is designed to work with a standard Epson printer and Epson parallel card located in slot one.

PRINTING A PAGE WHILE RECEIVING DATA To print the page displayed on the screen whilst in the receive mode press the "CONTROL & P" keys together. The page that is displayed at the time of pressing control P will be printed and the program will then return to the receive mode. **NOTE:** during the print procedure incoming data may be lost.

INTERLINK
RECEIVING VIDEOTEX cont'd

TO SAVE A PAGE OF VIDEOTEX press the ESCAPE key after receiving the page that you wish to save. A prompt will appear asking if you wish to save this page. Upon entering "Y" you will be asked to define the FILENAME and drive number onto which the file will be saved. After saving the page the programme will return to the receive mode.

TO EXIT THE RECEIVE MODE press the "ESCAPE" key and enter "N" in response to the prompt.

CATALOG DISK Upon entering option <5> a prompt appears asking which drive is to be cataloged. Upon replying the appropriate drive's contents are cataloged. Press any key to return to the menu.

QUIT Upon entering option <6> you are taken out of the programme and into Applesoft BASIC.

NetComm **VideotexII**

***for Apple //e & //c
Computers***

**Videotex Terminal
Communications Package**

Reference & User Guide

**Version 1.0
May 1985**

REPAIR AND REPLACEMENT

The reverse of the second sheet of this manual is your LIMITED WARRANTY. Read it carefully. Basically, it says this: If within 90 days of purchase, your DataNetComm hardware or DataNetComm diskette fails to function properly through some error on our part, we will repair or replace it at our option. It should be returned to us postpaid and properly packed (see below) along with the following:

1. Proof of purchase and purchase date
2. A description of the problem (and whom you think it is)
3. Where a diskette fails to function properly, a description of the system on which the program is being used (Amount of memory, peripherals attached, cards installed, etc.)
4. Your Warranty card (if you haven't already sent it in)

This warranty applies only to the original purchaser, and does not apply to any product which has been used prior to its sale by any dealer or distributor.

In the event that we receive no Warranty Registration card, no warranty service will be provided.

After the 90 day period (in the event that the failure is not our fault) the hardware will be repaired or replaced, at NetComm's option, and the entire cost including shipment shall be to your account. A faulty diskette will be recopied, if returned postpaid for a charge of \$12. If the diskette must be replaced, the charge will be \$25. Enclose \$12 with your disk to avoid C.O.D. and shipping charges. If your disk must be replaced, you will be billed C.O.D. for any unpaid charges.

SHIPPING DISKETTES

When mailing a diskette, do not just put it in a plain envelope. Not even a padded envelope. The post has an awful tendency to bend things. This generally destroys the diskettes. You should sandwich the diskette between two pieces of corrugated cardboard and then put it in an envelope. Write the words "DO NOT BEND" on both sides of the envelope in a colour which stands out. Alternatively, you may purchase special diskette mailers from your local dealer.

SOFTWARE UPDATES

Fill out and mail in the Warranty Registration card supplied with this product. If it becomes necessary for DataNetComm to provide a corrected version of your software, you will receive a letter describing the errors that are being fixed and any new features which you may get as a side effect. You may then send in your diskette and the new software will be returned to you.

This card will also put you on our mailing list for new products and upgrades to the product.

COMMENTS AND SUGGESTIONS

If you have suggestions for changes or improvements in the current product, or suggestions for a new product, just drop us a line. Your comments are always welcome.

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RADIO & TV INTERFERENCE

Some of the equipment described in this manual generates and uses radio-frequency energy. If it is not installed and used properly, that is, in strict accordance with the instructions, it may cause interference with radio and television reception.

There is no guarantee that the interference will not occur in a particular installation, especially if you use a "rabbit ear" television antenna. (A "rabbit ear" antenna is the telescoping rod type usually contained on TV receivers.)

You can determine whether your computer is causing interference by turning it off. If the interference stops, it was probably caused by the computer or its peripheral devices. To further isolate the problem:

Disconnect the peripheral devices and their input/output cables one at a time. If the interference stops, it is caused by either the peripheral device or its I/O cable. These devices usually require shielded I/O cables. For Apple peripheral devices, you can obtain the proper shielded cable from your dealer. For non-Apple peripheral devices, contact the manufacturer or dealer for assistance.

If your computer does cause interference to radio or television reception, you can try to correct the interference by using one or more of the following measures:

- Turn the TV or radio antenna until the interference stops.
- Move the computer to one side or the other of the TV or radio.
- Plug the computer into an outlet that is on a different circuit than the TV or radio. (That is, make certain the computer and the radio or television set are on circuits controlled by different circuit breakers or fuses.)
- Consider installing a rooftop television antenna with coaxial cable lead-in between the antenna and TV.

If necessary, you should consult your dealer or an experienced radio/television technician for additional suggestions. You may find helpful the following booklet, prepared by the Federal Communications Commission, "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock number 004-000-00345-4.

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Viatel, Telecom; Bulletin, ICL; Prestel, British Telecom; AFTEL, Travel Agents Federation; ANZTELL, ANZ Bank; Tango, Creative Communications; Telebank, Commonwealth Bank.

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IF THE INSTALLATION WORKED BEFORE WITH THE SAME HOST

Telecommunications Line Checklist
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INTRODUCTION

ABOUT THIS MANUAL

This manual describes the NetComm VideotexII Package and tells you how you can use it. VideotexII is a program which allows your Apple //e or //c to connect into the many Prestel-based Videotex services, including Telecom's Viatel. These services now offer many facilities in the areas of:-

- Home Banking & Finance
- Travel & Touring Reservations
- Teleshopping
- Provision of Software On-line
- Entertainment Bookings ... and others

Several organisations run Prestel based Videotex services. These include:-

Organisation	Service
Telecom	Viatel
ICL	Bulletin
Travel Agents Fed.	AFTEL
ANZ Bank	ANZTELL
Creative Communications	Tango
Commonwealth Bank	Telebank

Many more organisations are looking actively at setting up their own systems or Closed User Groups (C.U.G.'s) to allow their clients to access their computers.

Therefore VideotexII has facilities which can:

- Automatically dial your selected host.
- Do forms of home banking or teleshopping etc.
- Record information, while on-line, for later review.
- Printout screens to produce hard copy, i.e. confirmation of flight details, reservations etc.
- Obtain copies of programs for later use.

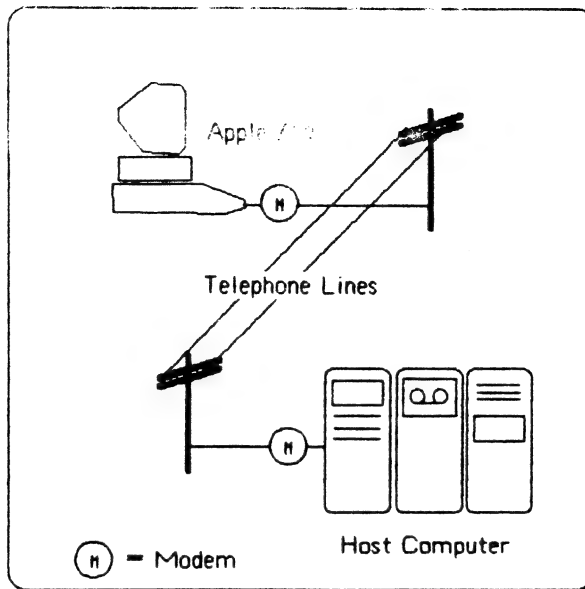


Figure I.1: VideotexII Connects Your Apple with Videotex host computers.

WHAT THIS MANUAL CONTAINS

This manual contains preliminary information for first time users who are not very experienced in Data Communications. It also contains quite detailed information for those interested in using the more advanced facilities provided. It is set out in easy to use sections.

FIRST, YOU SHOULD KNOW

Before you start with VideotexII you should know:

- How to set up and use your Apple, particularly the disks and keyboard. You should know a bit about file names and ProDOS™.
- How to install and use a Modem which connects the Apple to the telephone lines.

- With whom you are going to connect; this is important because you need to know the phone number, the I.D. Or Account Code and password etc.
- A little bit about using terminals when "on-line", that is when connected to a remote computer.

HAVE YOU READ THESE?

If you are not sure about how various parts of your VideotexII Terminal are supported by your Apple and you need to find out more ...

about this then first read this manual

Apple //e	Apple //e Owners Manual Apple //e Reference Manual
Apple //c	Interactive Owners Guide System Utilities //c Reference Manual Vols.1,2.
Disk & Disk Files	ProDOS Technical Reference Manual ProDOS Users Manual (especially File "PATHNAMES" Chapter 2).
Modem	In/Modem® Reference Apple Modem 300/1200 -Users Manual (Parts 1, 2) Smartmodem 1200 Owners Manual. SmartModem 21/23 Manual
Communications Card	NetComm Card & ACPC Installation Manual or ... Super Serial Card, Installation & Operating Manual.

WHO SHOULD READ WHAT?

Chapters 1 to 4 tell you how to start off and

how you can simply make easy, basic use of VideotexII. It is ended by a simple tutorial in Chapter 5.

Chapter 6 and The Appendices provide lots of additional backup information and should only be used for reference purposes.

To Find Out More About ... Read This ...

Getting Started	Chapter 1
Learn the Basics	Chapter 2
The Main Menu	Chapter 3
The On-Line Menu	Chapter 4
Beginners Tutorial	Chapter 5
How to Solve Problems	Chapter 6

AIDS TO UNDERSTANDING

In the fine Apple tradition this manual contains special notes that present unusual, helpful or important information. You should pay attention to this information.

"By the Way:" These boxes contain useful information that allows you to read quickly through the text and get an idea of the contents.

.....
"Warning": These warnings are important. Please read them carefully.
.....

These margin notes add brief descriptions or cross-reference for you.

Chapter 1

GETTING STARTED

This chapter tells you in detail how you get you and your VideotexII Apple ready to start communicating, that is to prepare for going "on-line" to your videotex host.

It tells you:

- What equipment you need and how you should check it is installed and connected OK.
- How you start the program and what you should prepare first.
- How to try out the program.
- What to do if it doesn't work.

"By the Way" - You should make at least one backup copy of the VideotexII program disk and store it in a safe place. The disk is not copy protected but is Copyright; you are entitled to make and keep one or two backup copies only.

"Warning" - Do not breach your license to use and do not breach the Copyright in this program. Do not copy this program for other people; this is illegal.

WHAT YOU NEED

Please check you have the following items of equipment, software and information.

You will need:

EQUIPMENT

An Apple //e or //c with a minimum of 64K RAM

- The Apple //e 80 column card, (The Apple //c has 80 column display built-in.)
- A high quality monitor/video display.
- At least one disk drive, preferably two.
- An Apple Profile 5 megabyte hard disk is an excellent addition.
- A Serial Communications Card for the Apple. The NetComm Card or the Apple Communications Protocol Card (ACPC or UCPC) is preferred; an Apple Super Serial Card will suffice. (The Apple //c has SSC type facilities built-in.)
- A modem with RS232 connections which is CCITT V23 compatible. The optimum choice is a NetComm In/MODEM or the Apple Modem 1200 (Australia only). Make sure any other modems are Telecom approved and compatible with VideotexII Auto Dial/Auto Answer facilities. Ask the dealer first!
- Clearly the modem needs to be connected to a dial-up telephone line.

The modem cable must be compatible with the Serial Card. Refer to the Modem Manual and the Serial Card Manual.

- If you wish to use VideotexII's unique on-line printer facilities then you will need an Apple Imagewriter. You need a Super Serial Card for this connection. (Again this is "built in" on the Apple //c).

SOFTWARE & DOCUMENTATION

You will obviously need the VideotexII program disk and this manual. Also you will need:

- A User/Installation Manual for your Communications Card (NetComm or Super Serial Card). Check that manual to ensure the card is properly installed.

- A manual for your modem, especially details of the modem commands and installation instructions. Follow these carefully. Connect the modem to the Comms Card AND to the telephone connection. Check the phone works OK for a voice call.
- Instructions on installation and use of your Printer (if you intend to use one). The ProDOS User and Technical Reference Manuals. Carefully read the sections on File Names, Volume and Directory names and Prefixes.

OTHER INFORMATION

As well as how to set up and use your Apple, you will also need to know the following: -

- The telephone number of the service or host with which you intend to connect. In particular get a note of the following: -
- The account code or identifier, plus the passwords (if any), and ...
- The correct sequence of steps to follow when "logging on" to the host.

Note: Copy details of your various services on the VideotexII reference guide in Appendix I

SETTING UP THE EQUIPMENT

Read the sections below to check you have the equipment you need properly installed

THE COMMUNICATIONS SERIAL CARD

VideotexII lets you use two types of "Comms" Card, either a NetComm Communications Card (which is the same as an Apple Communications Protocol Card) or the standard Apple Super Serial Card.

1. NetComm Card

This should be installed in Slot 2 of the Apple II, though you may install it in any free slot. There is a clear advantage in installing and using either the NetComm Card or the Apple Communications Protocol Card. It is this: these cards have their own dedicated microprocessors on-board and can properly control the line connection "protocols" in case the Apple is busy. The Apple gets busy, very busy, when you do "file transfers", that is transmit directly to or from the Apple's disk files.

"By the Way": This is because while the Apple does any read or writes to disk it disables interrupts, hence any characters coming down the line will be ignored and consequently lost.

Also these "Communications" cards are the only devices that support the special new Videotex full duplex line speeds of 1200/75 baud. This allows normal "typing" speed transmission inwards to the host but with data returned at a much higher speed; about 7.5 characters/second inwards with 120 characters/second out.

2. Apple Super Serial Card

The Apple Super Serial Card, and thus the //c, is quite adequate for normal "interactive" use where you do not wish to save data to disk whilst you are "on-line". The SSC cannot support Videotex's different transmission speeds (in and out), nor can the //c without the use of a special modem designed specifically for SSC/Videotex use, i.e. the Apple Modem 1200.

VideotexII - to a certain extent - automatically "configures" the SSC, as you

require, in various menus. However, there are a few things you must do initially. First, ensure the Jumper Block is installed correctly for Communications. Second, we suggest you set up the following SSC switch block settings.

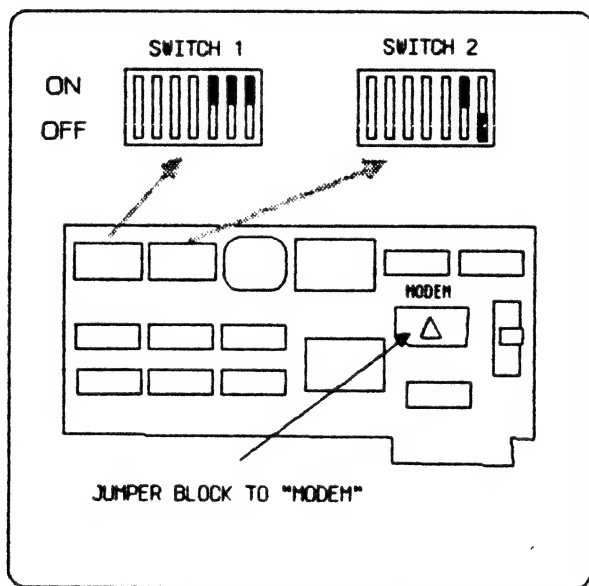


Figure 1.1: Recommended Apple Super Serial Card Switch Block settings.

"By the Way": Switches left blank are set as required by VideotexII and therefore may be in either position. It is mandatory, however, to set the other switches as shown.

THE MODEM

The sections below describe the various modems you can use.

NetComm In/MODEM

The NetComm In/MODEM should be installed in Slot 4 of the //e and connected to the normal Serial Comms Card.

External modems would be connected via a normal RS232 cable to the Comms Card/Port.

Apple Modem 1200

The new Australian Apple Modem 1200 is also closely integrated with VideotexII. VideotexII "knows" the commands to use to set up and autodial this modem.

Acoustic Coupler

If you are using an Acoustic Coupler then connect it to the Comms Cards as instructed by the manual provided.

If you wish to check the cable connections, refer to Appendix B.

.....
Warning: If your modem runs at 1200/75 and does not have a baud rate converter then it can only be connected to a NetComm Communications Card or an ACPC, in an Apple //e only. It will not operate correctly with the //c.
.....

In/MODEM

APPLE
MODEM
1200Other 1200/75
MODEM

	SSC	NCPC	SSC	NCPC	SSC	NCPC
//e	No	Yes	Yes	Yes	No	Yes
//c	No	No	Yes	No	No	No

Figure 1.2: Valid combinations of Modems and Communications Cards supported by VideotexII.

A PRINTER

VideotexII is able to copy the data displayed on the Apple's screen to a locally connected printer (using the "Print" option).

Currently the only type of printer supported as standard is the Apple **Imagewriter** which should be connected by a normal Apple Super Serial Card (or equivalent). This table shows you the switch and Terminal Block settings for the printer.

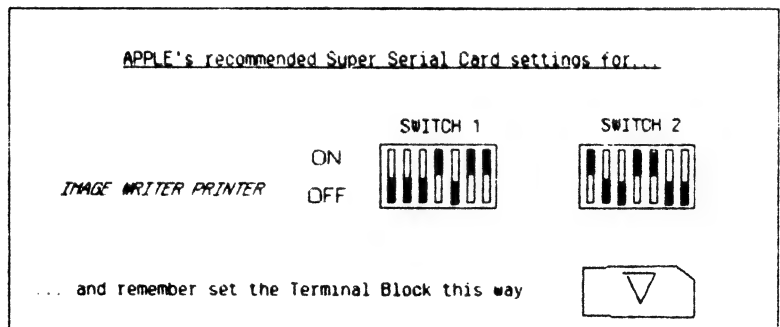


Figure 1.3: Apple's Recommended SSC Settings

"Note": The Terminal/MODEM jumper "block" should point to "Terminal" for the Printer SSC. Refer to the SSC User Manual. The switches left blank may be in either position for correct operation.

SPARE DISKS & DATA

If you plan to record programs for later use or screens of data, then have the spare disks (for the Teleloading or Recording File/s) ready before you start.

.....
"Warning" - The blank disks should be formatted first. Read the ProDOS manual, in the section about the FILER on how to FORMAT disks or use your //c utilities.
.....

TRYING OUT YOUR INSTALLATION

Each of the various Hardware and Software components can be tested when you have completed the various recommended installation steps. However, the simplest test is to go ahead and get VidentexII ready to go on-line.

"BOOTING" THE DISK

First insert the VideotexII program disk in the "bont" drive, close the drive door and turn on the Apple and its Monitor Display.

If the Apple is already
turned on then press
"CONTROL" "OPEN"
APPLE "RESET".

Initially, after the disk has whirled for a few seconds, you will see:

Figure 1.4: The VidentexII Flash Screen

NetComm (Australia) Communications

*** VideotexII ***

Apple // Videotex Emulation

Written by Ian Joyner

(c) Copyright 1985

NetComm (Australia) Pty Ltd

Incorporated in New South Wales

Product No NC20/VT/2.00

after which you will see:-

Apple Videotex v2.00
(c) 1985 NetComm (Aust) Pty Ltd

Configuration - ONLINE SAMPLE

Main Menu

1. Terminal Mode
2. Dial and Connect
3. Utilities
4. Terminal Configuration
5. Line Configuration
6. Phone/Modem
7. Apple Configuration
9. Quit

Select item then press carriage return

Escape - no escape

Type number or use up/down arrows then press RETURN

Figure 1.5: The VideotexII Main Menu

If you haven't been able to get this far check the Troubleshooting guide in Chapter 6. If your problem is not easily solved, consult your Apple Dealer. When you see the Main Menu as in Figure 1.5 then your program checks out OK.

PREPARING FOR ON-LINE

There is a standard sample "configuration" called **ONLINE.SAMPLE** which should allow connection to most services.

If this is the first time you have used your VideotexII disk then this **terminal** configuration (**ONLINE.SAMPLE**) needs to be added to, depending on your Apple's precise configuration.

Read Chapter 2 and 3 to see how to use the menus and their facilities to set up **ONLINE.SAMPLE** (or to use it as the basis of your own new configuration) so that it is exactly what you need for your first on-line session.

"By the Way" - You will find VideotexII very easy to use, but you will make faster progress by becoming familiar with the Main Menu before you have to worry about the modem and phone and the other computer.

GOING ON-LINE

When you have set up your personal **ONLINE.SAMPLE** configuration you should check the telephone number, account or access codes and passwords before you run your first "on-line" VideotexII session.

Remember, it will be easier if you read the introductory chapters first

Depending on your modem you may Auto Dial or manually establish the connection. Read

Chapter 4 to see what facilities you can use while you are connected, "on-line", to the remote computer.

TUTORIAL

Chapter 5 gives you a step by step guide to checking and modifying the standard configuration contained in **ONLINE.SAMPLE** and to add your chosen telephone number.

Then you can connect to the remote computer, using **Auto-Dial**.

If you are not really sure, follow Chapter 5 step-by-step to see just how simple it really is.

The general steps you will follow for a session are as follows:

New Configuration

Remember,
"Configurations" are
described in detail in
Chapter 2 below

Select a new configuration name then check (and if necessary modify) the Terminal, Line and Apple details.

Enter the Phone/Modem details:

Save the Configuration then Dial, Connect and log on to the remote computer.

Whilst on-line make your enquires, read your mail (electronic mail? home banking?).

When finished log-off, and quit VideotexII.

Existing Configuration

Select the existing Configuration, Dial, Connect and log-on.

"Note": VideotexII "remembers" your last configuration and so you can immediately Dial and Connect if the last configuration is the one you now want.

Do your on-line work, log-off and quit VideotexII.

WHAT TO DO IF IT DOESN'T WORK

If you have troubles and are not sure where you are or what exactly is not right, sit back and think through what has led up to your problem.

Check out Chapter 6 - Troubleshooting. If the problem persists restart and carefully retrace your steps. Note down the symptoms and what you think is the source of your problems. Call your dealer or your support person who will then advise you on how to get around your problem.

Chapter 2

BASIC USE OF VideotexII

Before you dial and log on to any host videotex service you must ensure you have correctly set up the VideotexII program.

VideotexII has easy to use Menu facilities to allow you to do this "set-up".

HOW TO USE THE MENUS

This chapter tells you how to use the VideotexII menu facilities, how to choose and confirm your selections and how to undo changes you don't wish to make.

It also describes the basic layout of a typical menu screen.

Chapter 3 below describes each menu in more detail, including lists of default settings where appropriate.

A default setting is the answer VideotexII expects - it anticipates your needs. You may easily change the setting but can quickly accept the default if VideotexII was right. Just press Return.

VideotexII "CONFIGURATIONS"

VideotexII is smart. It lets you record the different details in files called Configuration files (or Session files if you like) of the various videotex hosts you wish to dial.

This means everything you need to specify about a particular link can be saved and re-called, exactly as you last used it, whenever you wish.

"By the Way": - Use a configuration name that tells you instantly who or what the configuration is. For example "VIATEL.VIDEOTEX".

The only item which should change between configurations would normally be the telephone number.

Each time you use VideotexII it remembers the last Configuration you used. Also if you change part of a particular configuration, and then try to Select a different configuration, VideotexII will remind you of the fact that you have not Saved the changes made.

The Utilities menu lets you Catalog your files at any time so you can see what Configurations you have saved.

"Helpful Hint" - VideotexII saves all your Configurations in a special sub-directory called CONFIGURATIONS. Check your ProDOS Users Manual on how these sub-directories work. Use Make Directory to build your own sub-directories. Use Change Prefix before you Catalog. Select from and Save into these sub-directories.

A TYPICAL MENU

The Main Menu of VideotexII looks like Figure 2.1; most of the other menus are very similar in layout.

Each menu of options is contained inside a menu card. As you progress, sometimes cards overlay the first menu. However, VideotexII always shows you graphically where you came from and then tells you how to get back. Look at Figure 2.2.

The escape memo on the bottom right tells you where Escape (see below) will take you or what the result of that Escape may be.

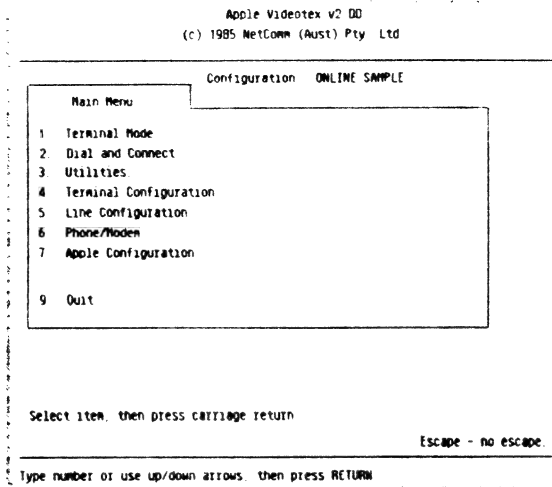


Figure 2.1: The Main Menu

Any instructions or suggestions on your choice are listed on the bottom left of the screen. Any errors or warnings, and sometimes friendly advice, will also display in this region.

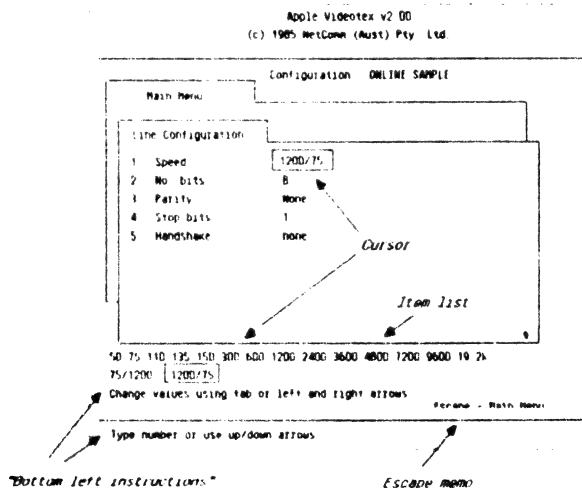


Figure 2.2: The Message Areas of the Menu

THE CURSOR

The menus offer a selection of things you can do. The item currently selected is displayed in **inverse** or is **highlighted**. This is the **selection cursor**.

You can select any other item or option by:

- 1) Typing its number or ...
- 2) Using the **up** or **down** arrows.
As you do so the cursor moves to highlight your choice.

You can "request" or "instruct" the cursor to **wraparound** by selecting "one too many" up or down (or left or right) arrow keys. Don't worry, it is often the shortest way to the item you require. The cursor won't get lost and you can't cause any harm.

SELECTING AN OPTION

When you arrive at the selection you want, confirm your choice by pressing the **RETURN** key.

On some Apple IIe and
IIc keyboards **RETURN** is
marked with a
"down then left-pointing
" arrow

When you get into one of the "overlay" menus and choose an option, you may then be given an item list from which you may select. This is displayed below the menu card, across the bottom of the screen.

Now you should (following the guidance of the bottom left instructions) select with the left and right arrows or the **TAB** key.

Confirm your selection with RETURN or backout with ESCAPE (see below).

Check the Escape Memo.
Read the bottom left
instructions. Check any
warning or advice
messages carefully

Select two or three second level (or overlay) menus now, move around inside them, escape out. It is very easy and extraordinarily quick.

CORRECTING & ESCAPING

If you select something you don't really want, you can easily back out. If you have selected a menu then ESCAPE to your original position, that is press the ESCAPE key (see the top left hand side of your keyboard). If you have gone so far as to choose from an item list in a menu then ESCAPE will Undo the Change and leave the old selection displayed.

"By the Way": The Escape memo always tells you what the results of Escape will be.

If you select an item by mistake and confirm that selection (with RETURN) simply re-select the item and choose, correctly on your second go, and then confirm with RETURN. Use the "left arrow" key to correct typing errors just like a backspace key on a typewriter.

ITEM LISTS & DATA ENTRY FIELDS

Sometimes VideotexII will give you an item list from which you select your choice (with the left/right arrow keys confirmed by RETURN).

However, sometimes you will be expected to type data, like names of files or numbers to dial.

VideotexII indicates what type of data it requires both in the "bottom-left" instructions AND by the "delimiters" that show the start and end of the field. These delimiters also show you the maximum length of data you may enter.

As each field is introduced to you it will be described in detail; but in summary:

" "- quote field shows Alpha-numeric data or string of numbers should be entered.

#- number field; enter a number (one in a range, e.g. 0-255).

\$ \$- Hex field; enter a Hexadecimal string.

Remember, type in the data and confirm with RETURN.

DEFAULT SETTINGS

At various stages in your use of the Main Menu and its second level menus you will see selections already made for you. This applies more particularly in the Terminal Control (On-line) menu.

These standard selections are called "default settings" and they allow you to move more rapidly in some parts of the program.

Default settings allow you to move quickly through the menus. But change them whenever you wish. If possible they will be saved in your configuration.

For example, the Main Menu default setting is Terminal Mode. When you start up VideotexII you can immediately press Return if you know it is the right configuration because the default in the main menu is Terminal Mode. Another example is the Utilities default setting which is Save; after you have made changes to a configuration, if you select Utilities the

immediate default is **Save** and you can press Return if that is indeed what you want.

Sometimes VideotexII provides **default names**, especially the name of disk files used by **Write Page** to the Recording File Disk. You may change these names if you wish but the defaults ensure a working solution if you forget.

FILENAMES

VideotexII filenames are essentially the same as ProDOS file names except for a few extensions which will make directory handling a lot simpler for you (i.e. you won't have to continually type long pathnames).

ProDOS Filenames

A ProDOS filename or volume name is up to 15 characters long. It may contain capital letters (A-Z), digits (0-9), and periods (.), and it must begin with a letter. Lowercase letters are automatically converted to uppercase. A filename must be unique within its directory. Some examples are:

LETTERS
JUNK1
BASIC.SYSTEM

ProDOS Pathnames

A ProDOS pathname is a series of filenames, each preceded by a slash (/). The first filename in a pathname is the name of a volume directory, (the name of the disk). Successive filenames indicate the path, from the volume directory to the file, that ProDOS must follow to find a particular file. The maximum length for a pathname is 64 characters, including slashes. Examples are:

/PROFILE/GAMES/DISKWARS

ProDOS Prefix

Having selected one prefix which may indicate one or a few levels in a directory, you can indicate further directory levels by simply entering its name. If you start your new name with a "/" ProDOS assumes you are identifying a new volume name. For example, if the current prefix is:-

/MYDATA/EMAILIN

and if you type:-

NOV.12

the file selected will be:-

MYDATA/EMAILIN/NOV.12

But if you type:-

/PRO/NOV.12

as the name you require then ProDOS looks for the file "NOV.12" in the disk volume /PRO.

The Home Directory

This is the directory where VideotexII was "booted" (started) from, i.e. where all those VideotexII.xxx programs can be found.

VideotexII Extensions

There are three extra characters which VideotexII uses to give you extra power in handling pathnames. Briefly,

"/" By itself indicates the top level directory in the current prefix. (ie. the disk volume name)

"." Means the directory up one level from the directory in which you are currently located.

"%" Indicates the home (see above) directory.

If used, "." and "%" must be the first characters in the pathname specified or they may be used by themselves. Note that "." embedded in a pathname has no special significance, but is treated as another file character. "%" is illegal in the middle of a name.

The best way to find out exactly what these do is practice. So try them out by using "Catalog" and "Set Prefix" in the utilities menu (see Chapter 3). Try cataloging on ".", "/", and "%". These will most likely give you a catalog of the same directory, but you will have arrived at this from different directions. You will find that when you use directories in a more sophisticated way that the ".", "/" and "%" features are very handy. Note that "." and "%" can be used wherever a file name is required in VidentexII.

Chapter 3 – SETTING UP VideotexII COMMUNICATIONS

Before you go on-line the Main Menu should be used to set-up VideotexII.

Whilst you are on-line, (ie. after you have connected to your remote computer) the On-Line Menu helps you use and control the VideotexII "terminal". This is described in Chapter 4 below.

THE MAIN MENU

This chapter tells you what the Main Menu contains and what each selection from the Main Menu does.

These facilities let you specify all that you need for VideotexII to set up communications.

Remember: Select your chosen option with the up/down arrows, confirm with Return, Back Out with Escape. Check the Instructions and Warning Boxes.

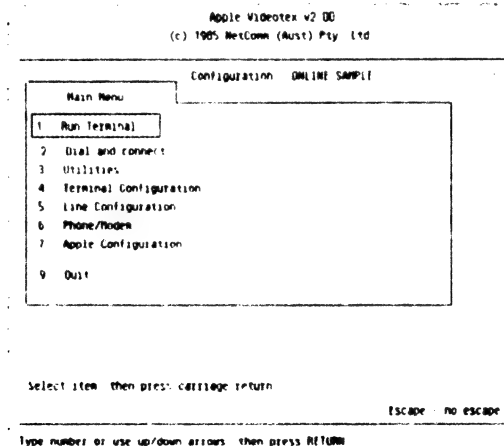


Figure 3.1: The Main Menu of VideotexII

"By the Way" - As this is the "top-level" of VideotexII then you clearly cannot ESCAPE. The message "Escape - No Escape" is not meant to be ominous, - rather, simple English. Use Quit if you wish to leave the program.

MAIN MENU 1. TERMINAL MODE

Figure 3.1 shows the Terminal Mode option of the Main Menu highlighted. Pressing RETURN confirms this as your choice.

The name of the configuration currently selected is displayed above the menu card (in this case ONLINE.SAMPLE).

.....
"Warning" - It's a bit early to go into terminal mode. Don't press RETURN or if you have already and can't figure out what is happening then Re-boot the Apple with CONTROL-OPEN APPLE-RESET.
.....

Terminal Mode loads the VideotexII communications software ready for on-line operation. It assumes that connection with the host is already made or will be made manually. You will see a message on the screen advising you when to make the connection if this is necessary.

You use terminal mode if you are connected to a local host computer and don't have to make a telephone call, or if you are already connected but returned to the main menu for some reason, or if you have to manually make the connection via a non auto-dial modem, acoustic coupler or some such device.

Note that the "dial and connect" message is only advisory. Don't worry if you have not connected by the time the message disappears.

VideotexII is very patient and waits 'till you connect.

MAIN MENU 2. DIAL AND CONNECT

This option does the same as terminal mode except for the extra step of auto dialling. You will see VideotexII dialling as it displays **Dialling >>><telephone number>**.

If this is the wrong number or you have forgotten something just press **ESCAPE** to hang up the dialling sequence. You should have already specified a telephone number.

If the telephone number is blank **Dial and Connect** will only initialize the modem ready for answering an incoming call. This can also be used for semi-automatic dialling with the **In/Modem** i.e. the initializing will set the **In/Modem** switches for you.

Note that **Dial & Connect** will hang up any call currently connected. If you don't wish to hang up use **Terminal Mode** instead.

WHERE NEXT?

Each of the items on the Main Menu are described in detail below.

Briefly,

these options do this

- | | |
|---------------------------|---|
| 3. Utilities | Helps you keep your VideotexII "house" in order. You can save, delete, change configurations etc. in this menu. |
| 4. Terminal Configuration | This lets you change details about the |

"physical" terminal
you are using.

- 5. Line Configuration Use this to enter and select details about the line and its "protocol".
- 6. Phone/Mode Here's where you ask for Auto-Dial etc.
- 7. Apple Configuration A menu that specifies what (and how) your Apple has connected to it.
- 9. Quit The easy way out.

Each overlay menu is described below.

MAIN MENU 3. UTILITIES

The Utilities option of the Main Menu opens up as shown in figure 3.2.

The Utilities are a series of "tools" that help you do specific housekeeping tasks on your VideotexII disks. You can create new configurations, select old (i.e. existing) configurations and delete configurations.

Also you can Catalog your disks and select new disk volumes or sub-directories of the existing volumes.

The Utilities Menu displays the current prefix that is in effect. The current configuration already selected by VideotexII is noted outside and above the Main Menu.

Escape returns you immediately to the Main Menu. Select any item in the Utilities Menu by typing its number or by using the up/down

arrows. Confirm your selection with the Return key.

Apple Videotex v2.00
(c) 1985 NetComm (Aust) Pty. Ltd.

Configuration : ONLINE SAMPLE

Main Menu

Utilities

Prefix - /VIDEOTEK/CONFIGURATIONS/

1. Save
2. Change
3. Delete
4. Catalog
5. Make Directory
6. Change Prefix

Select item, then press carriage return.

Escape - Main Menu.

Type number or use up/down arrows, then press RETURN.

Figure 3.2: The Utilities Menu

UTILITIES 1. SAVE

This is the "default" option in the Utilities Menu. All current Terminal, Line, Phone/Modem, Apple and On-line details are saved, as they are currently displayed, in the file named in Current Configuration. Any old details will be overwritten.

Occasionally VideotexII will remind you if you appear to have made important changes and not specifically saved them. You may ignore this friendly help with ESCAPE. RETURN confirms the Save should proceed.

UTILITIES 2. CHANGE

This is the option you choose when you wish to instruct VideotexII to fetch a different configuration file.

Quote fields indicate
Alpha Numeric Data
should be entered. You
can only enter
alphabetic characters
and numbers. You can
use slashes ("/") or
full stops (".") as part
of a ProDOS filename.
Remember the VideotexII
extension of ".V" and
".H".

If you confirm your selection the cursor moves to the right into the area contained by the quote marks.

Now you should type the name of the new configuration you require and press RETURN when the name is fully entered.

You may include any valid ProDOS pathname including, if necessary, the volume name. It will be correctly observed but without changing the Current Prefix shown inside the Utilities Menu. Only Change Prefix (see below) will modify this.

New Configuration

If VideotexII finds the name you have typed does not exist, it assumes it is a NEW configuration and it uses all the current terminal etc. details in this NEW configuration. You may/should subsequently change some of those details and then Save your new Configuration.

VideotexII may remind you to save the old configuration if it appears to have been modified and not saved. Respond to this reminder with RETURN if you wish to confirm the save or with ESCAPE if you wish to backout of the save.

.....
"Warning" - VideotexII saves all configurations in files in a sub-directory called CONFIGURATIONS. You can change this (the name or even the whole idea if you wish) by selecting a new Prefix (see below) but it will be easier to leave all your configuration files saved inside the one sub-directory. For you and us!!
.....

Existing Configuration

VideotexII will open the disk file and read in the Terminal, Line, Phone/Modem and Apple details.

As above, if you appear to need to save the previous configuration because you may have changed it, VideotexII will offer you that option before loading the new configuration.

UTILITIES 3. DELETE

Use this in the same fashion as Change, just type in the name of the file to delete and press RETURN. Note this will delete any file, not just Configuration Files.

Use this option to remove old unused files and release extra space on your disk.

"For the Expert": By now you may have noticed VideotexII continues to display any names you enter in quote fields.

You will find this will prove very convenient. If you have partial pathnames in your files, you need not re-type the whole pathname - simply use the right arrow to slip across the unchanged section - then change the final part of the file name. Press RETURN IMMEDIATELY FOLLOWING THE LAST CHARACTER you required to be recognised.

UTILITIES 4. CATALOG

This Catalogs - writes a list of all the files - to the screen. The Catalog listing shows the name, type, size (in blocks) and modification date for each file.

A Block is 512 bytes. 2
blocks is 1024 bytes.
1 = 1 Kbyte

Use this to remind yourself of the various configuration and data file names you have on your disk.

When you select Catalog the cursor moves to the right into the quote field.

If you, now, confirm with RETURN (i.e. you enter a blank name) then the directory named by Prefix (inside the utilities menu at the top) is cataloged.

You can, however, type in any partial or complete pathname and this new directory will be Cataloged for you. No change will be made to the Current Prefix.

"Warning" - Check the ProDOS Manual on Complete Pathnames for the cumulative effect of starting the name without a slash. For example, "CONFIGURATIONS" would be added to "/VideotexII" but "/VideotexII.NASTER/CONFIGURATIONS" replaces the whole Pathname. Remember, the Current Prefix is not modified at all. See more below in Change Prefix.

UTILITIES 5. MAKE DIRECTORY

This facility allows you to create a brand new sub-directory. This would typically be used to create a common "pool" of files associated with one service, one configuration or possibly, one day's on line sessions.

Follow the "quote field" rules detailed above to enter the alphanumeric pathname.

This selection does not affect the Current Prefix, it only creates an entry in the disks Catalog under the new name of the "directory" you have entered.

UTILITIES 6. CHANGE PREFIX

This selection lets you do just that, change the **Current Prefix**. This is displayed inside and at the top of the Utilities menu.

You should select this if you wish to Save or Change configurations saved in a different directory. The Change Prefix facilities allow you to store the VideotexII program on a Hard Disk in one volume with Configurations in a different volume and Data files in a third different volume.

Enter the new Prefix you want and confirm with **RETURN**.

The Prefix name must be a valid ProDOS pathname, (see chapter 2).

As stated above we have set up, and advise you continue to use, one directory for the Configuration files.

It is called:

"/VideotexII/CONFIGURATIONS"

i.e. the disk volume is:- "VideotexII"
the sub-directory is:- "CONFIGURATIONS"

NOW, a typical file in there is:-
ONLINE.SAMPLE so its correct Pathname is:-

"VideotexII/CONFIGURATIONS/ONLINE.SAMPLE"

If you start a new Prefix without any slash the new name is added to the Current Prefix. That means:-

if the Current Prefix was:
"/VideotexII/CONFIGURATIONS"
and you typed: "USA.SERVICES"
(N.B. NO SLASH)
the new Current Prefix becomes:

"/VideotexII/CONFIGURATIONS/USA.SERVICES"

"Warning No. 1": You would need to use Make Directory to create USA.SERVICES first or ProDOS will be unable to open the (as yet non-existent) directory.

"Warning No. 2": If you typed /USA.SERVICES [N.B. with a SLASH (naughty!!)] ProDOS would check all the connected Disk Drives for a volume called just that, /USA.SERVICES, and will almost certainly report it doesn't exist.

There are also some quick ways of changing prefix for your convenience.

Just "/" by itself will take you back to the current volume directory. Thus if the current prefix is
"/VideotexII/CONFIGURATIONS/USA.SERVICES" and you enter "/" the current prefix becomes just
"/VideotexII".

Secondly, "." will return you to the directory immediately above the current directory. For example, if the current prefix is
"/VideotexII/SOME/VERY/LONG/DIRECTORY/NAME", then entering "." will leave the current prefix
"/VideotexII/SOME/VERY/LONG/DIRECTORY". You won't have to retype the entire pathname.

Remember, also, "%" will return you to VideotexII's "home" directory.

If this is not clear
read the ProDOS Users
Manual

MAIN MENU 4. TERMINAL CONFIGURATION MENU

This menu describes the features this Apple has as a videotex terminal. The most important feature is the User Identification option (number 5). The delay parameters are used very infrequently. They allow you to add delays in the data being sent from your Apple to your host.

Delays are a legacy of asynchronous terminal communications where some computers needed some time to digest data sent to them.

The only time you would need to use these delays is when connecting to a computer which is emulating a videotex service and may, in fact, be using a modified asynchronous protocol. Use these options only at the request of the host's systems programmer.

The User Identification option is used to store the user name issued to you by your host. When you dial and connect into your videotex host VideotexII will automatically log in to the host.

As with all VideotexII displays ESCAPE takes you back out, the up/down arrows (or typing the number) select the item and pressing RETURN confirms you wish to consider a change.

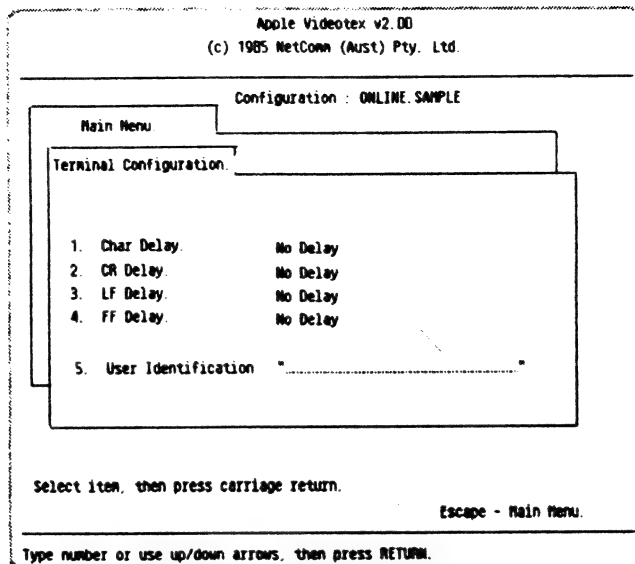


Figure 3.3: The Terminal Configuration Menu

TERMINAL CONFIGURATION 1. CHAR DELAY

To add a delay after each character sent, select the Char Delay option and choose the delay you require.

You can pick:

- No Delay
- 32 milliseconds
- 250 milliseconds (1/4 second)
- 2 seconds

These are displayed in an item list below the menu card. Use the left or right arrow (or TAB) to select the item you want and confirm with Return.

The default setting is **NO DELAY**.

TERMINAL CONFIGURATION 2. CR DELAY

This sets the delay for carriage return characters only.

You have the same four displays to choose from.

The default setting is NO DELAY.

TERMINAL CONFIGURATION 3. LF DELAY

This is a similar facility as the above CR Delay but here the delay is added after the LF Character.

You have the same four delays to choose from.

The default setting is NO DELAY.

TERMINAL CONFIGURATION 4. FF DELAY

As above but here the delay, if selected, is added after the FF character.

TERMINAL CONFIGURATION 5. USER IDENTIFICATION

At the beginning of each session you host requests username information to automatically log you into the system.

If this field is left blank, then you will have to type in your user identification details when the remote host prompts you.

However, with this field completed you will be automatically logged onto the your videotex host.

Some videotex systems expect a "/" after the user number. With these systems you may not be able to include the password in the User Identification field, so type the password in yourself when requested by your host.

By The Way: On the //c you must go into terminal mode (Option 1 on the Main Menu) before you Dial and Connect (Option 2 on the Main Menu). Remember that Closed Apple-II takes you from Terminal Mode to the Main Menu.

MAIN MENU 5. LINE CONFIGURATION

This option in the Main Menu lets you select and specify details about the logical connection that occurs between the Apple/VideotexII combination and the remote host.

Some of the selections inside this main menu could arguably be called terminal details but they really refer to the protocol or the flow of data between the terminal and the host. That is why they are grouped together in this menu.

Ensure you ask your host computer support person or the user at the other end, whether you are both using IDENTICAL Line Configuration settings.

If you use different settings VideotexII may not be able to understand the data from the other end.

"By the Way": The only item you would normally ever need to change would be the speed. The rest are standard Videotex parameter and may only need to be changed if you are connecting to a host which is emulating a Prestel based system.

Here is the Line Configuration Menu that is displayed when you select it from the Main Menu:

Apple Videotex v2.00
(c) 1985 NetComm (Aust) Pty.Ltd.

Configuration : ONLINE SAMPLE

Main Menu.

Line Configuration.

1. Speed	1200/75
2. No. Bits.	7
3. Parity	Even
4. Stop bits.	1
5. Handshake.	None

Select item, then press carriage return.

Escape - Main Menu.

Type number or use up/down arrows, then press RETURN.

Figure 3.4: The Line Configuration Menu

LINE CONFIGURATION 1. SPEED

When you select this option VideotexII displays an ascending list of speed options below the menu cards. Use the left or right arrow keys, or the TAB key, to choose the speed you need from the item list and press RETURN to confirm.

The only speeds you would choose for VIDEOTEX/PRESTEL/VIATEL are 1200 or 1200/75. The other speeds are not often required but are there for completeness and for those experts who do wish to use them.

"By the Way": 1200/75 should only be used with the Netcomm Card or ACPC and 1200 should be selected if you are running VideotexII through an Apple Modem 1200 which is connected to a Super Serial Card or a //c port.

LINE CONFIGURATION 2. NO. BITS

The data is transmitted in an internationally agreed standard code called 'ASCII'. ("ASCII" means American Standard Code for Information Interchange.)

"By the Way": Read Appendix A for a primer on Data Communications if you wish to learn more about these basic technical details.

The ASCII code can represent Alpha characters (A-Z, both upper and lower case), Numerics (0-9) plus Specials (. / - \$ etc.).

There are a variety of different "bit structures" used by ASCII to represent each character and you must select the same number of bits that your host (i.e. the other end) is using.

Having said all that, nearly everyone uses 7 or 8 bits. The Apple's internal Bit-structure is 7 bit ASCII with the eighth bit used for special internal verifying purposes.

Check with your host support person as to the correct number of bits you should use. VideotexII lets you select

5, 6, 7 or 8 bits.

The default setting is 7 bits. This value is the Videotex standard.

LINE CONFIGURATION 3. PARITY

VideotexII lets you select any one of the following parity settings:-

None, Odd, Even, Mark or Space.

The Parity bit is an extra bit added and used to check if transmission errors have resulted in an unwanted change to your data.

.....
"Warning": Use of parity is only a check for errors. It does not result in any correction. You must actually look for, and correct, the error yourself.
.....

It is most important that you select the same parity setting as the remote host.

The default setting is EVEN. This value is the Videotex standard.

LINE CONFIGURATION 4. NO. STOP BITS

This option lets you specify more information on the line data flow. As each character is transmitted one or more stop bits are added to control the transmission.

Read Appendix A for more details on Stop Bits

You can select any one of the following:

1 or 1.5/2

The default setting is 1. This value is the Videotex standard.

MAIN MENU 6. PHONE/MODEM

This option in the Main menu lets you specify details of the phone number you wish to Auto Dial. That is, VideotexII will AUTOMATICALLY dial the number and try to connect (when you select the dial and connect option) if you have entered a phone number plus modem details in this menu.

This is one of VideotexII's major strong points.

PHONE/MODEM 1. PHONE NUMBER

VideotexII provides two methods of connecting to a remote host via the phone network. You can use Auto-Dial or you can Dial Manually.

MANUAL DIAL

You can achieve manual dial in two ways. Firstly by using Main Menu Selection 1 Terminal Mode. This ignores the telephone number altogether.

Secondly, Main Menu Selection 2 Dial and Connect will require manual dial for connection of the telephone link if the telephone number in the phone/modem menu is blank.

During manual dial, the communications software will be loaded first. You will then see a message advising you to "dial and connect now", while the VideotexII program is loaded.

Note, this is only an advisory message. Don't worry if it disappears before you have connected, as this message means that the emulation program has been loaded and is ready to begin.

Apple Videotex v2.00
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Configuration : ONLINE SAMPLE

Main Menu

Phone/Modem

1. Phone number.	"Vietel 9..01955"
2. Modem Make.	In/Modem
3. Dial Type.	Pulse
4. Modem Type.	CCITT
5. Modem Slot	4
6. Answer/Originate.	Originate

Select item, then press carriage return.

Escape - Main Menu

Type number or use up/down arrows, then press RETURN

Figure 3.5: The Phone/Modem Menu

AUTO DIAL

If you select Dial and Connect with a phone number in the phone/modem menu, the Auto Dial sequence will be initiated. This will be seen

on the screen as the message **Dialling >>>** followed by the phone number. When the dialling is complete you will see the message **"Waiting for answer"**.

While dialling or waiting for answer you may press Escape to cancel the call. When the call is answered you will see the message **"Call answered"** and the terminal emulation program will start.

If the other end does not answer or send a Carrier signal within forty seconds you will see the message **"Carrier lost or not detected"** displayed and you will be returned to the Main Menu.

VideotexII can support several different modem types.

1. The NetComm In/Modem

The modem is controlled directly by VideotexII and it is plugged into one of the slots. This will, of course, work only on an Apple //e. (You may not use it with an Apple //c. You must use an external modem, i.e. Apple, Hayes or Other).

If you select In/Modem you must also set up fields 3 to 6 correctly. You may include alpha text within the phone number as this is ignored. A comma specifies a 2 second pause before dialling the next digit. You may also include spaces in the phone number to make it more readable.

Example **"switch 9,,VIATEL 01955"** is equivalent to **"9,,01955"**.

2. Apple and Hayes Modems

With the Apple modem you only have to make sure selections 3 and 4 are filled in. The Hayes only has selection 3. As you change the modem

selection, other selections will disappear and reappear so that only the relevant selections for that modem type appear.

The **Apple**, **Hayes** and **Other** modems are external modems, i.e. are part of the communications line. These are controlled by special commands sent down the line to the modem.

"For Experts": This section describes the modem commands.

VideotexII knows about the **Apple** and **Hayes** modem commands. Thus you may choose either of these if your modem is **Apple** or **Hayes** compatible. If you want to do something "strange" with your **Apple** or **Hayes** you may select **"Other"**.

With external modems every character (except blanks) in the phone number is sent to the modem.

For **Hayes** and **Apple** VideotexII first sends +++ to make sure the modem is capable of receiving commands. This also hangs up the telephone line. It then sends "AT" followed by "ATV0" to set the modem into numeric answer mode. If no responses are received from the modem you will see a message informing you that the modem is not ready and you will be returned to the main menu. You should check that the modem is properly connected and that it is turned on.

If the modem is ready then the dialling will commence with the "ATD" command followed by "P" for pulse dialling or "T" for tone dialling. The phone number is sent and displayed on the screen at the same time. Blanks are not sent to the modem, so you can embed these to make the number more readable.

Note that commas cause a two second delay. Delays are advisable if you first dial a switchboard or are dialling international numbers. You may put more than one comma in a row to create large delays.

Characters embedded in the phone number may be interpreted by the modem. Thus you can embed I's and P's to swap from tone to pulse dialling or vice versa.

This is useful if you are dialling through different exchanges which use different dial types.

You may of course control external "Smart" modems while on line. Also, VideotexII will automatically hang them up for you. If you want to learn all the tricks with these modems you should refer to a modem manual.

3. Other Modems

VideotexII plays dumb when you select "Other". It will not check for error conditions and sends the string that you enter in the "phone number" to the modem.

It also assumes that the call is answered, so it will be your responsibility to check that the call was in fact answered correctly.

PHONE/MODEM 2. MODEM MAKE

Make sure you select the right modem make. There are four: -

- | | |
|-----------|--|
| -In/Modem | (Worldwide application) |
| -Apple | (Modem 1200 [for Australia],
Modem 300 or 1200 for USA) |
| -Hayes | (Smartmodem 1200, USA only) |
| -Other | (You get to do this yourself!) |

If you select Apple, Other or Hayes, VideotexII deletes any options that follow which become irrelevant.

PHONE/MODEM 3. DIAL TYPE

Some modems are capable of both normal Pulse and Tone dialling. In Australia, generally select Pulse.

Tone facilities are becoming more widely available in Australia but many telephone exchanges cannot yet support the tone signal. Tone dialling is much faster.

PHONE/MODEM 4. MODEM TYPE

This is required only by the NetComm In/MODEM and the APPLE MODEM 1200. The default is CCITT and this MUST be selected for All Australian links, especially Videotex systems.

PHONE/MODEM 5. MODEM SLOT

This only applies to the NetComm In/MODEM; so does the rest of this section - skip over it if you are using an external modem.

The Apple II slot in which you have installed the In/Modem should be chosen from the item list.

Note some slots are disallowed (you can select 0, 1, 2, 4 or 5).

PHONE/MODEM 6. ANSWER/ORIGINATE

Though modems at each end of a link must be compatible types, the one that starts the sequence is normally the Originator. The receiving party is the Answerer.

If you do the dialling Originate mode overrides the setting you select here as the In/Modem is only capable of dialling in originate mode.

If you wish the modem to Auto Answer you may select either answer or originate, but you should leave the phone number blank. Also you must use dial and connect to initialize the modem.

MAIN MENU 7. APPLE CONFIGURATION

This part of the Main Menu, when selected, displays the menu shown in figure 3.6.

As you can see this is used to specify to VideotexII how your Apple is physically configured, particularly whether you are using a NetComm Communications Card (= Apple Communications Protocol Card, "ACPC") or the Apple Super Serial Card (= the //c Serial Port in "Communications Mode"). Also you enter details of your printer, if any.

APPLE CONFIGURATION 1. COMMS PORT/SLOT

Specify which slot you are using for your Comms device.

Apple //e

You have been advised to use Slot 2 to install your NetComm Card (or ACPC) or the Apple SSC. You may install it in 1, 2, 4 or 5. Choose the correct slot from the item list. Check it is actually installed in that slot.

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Configuration : ONLINE SAMPLE

Main Menu.

Apple Configuration.

1. Comms Port/Slot.	2	2. Comms Card.	NetComm
3. Printer Port/Slot.	1	4. Printer Type.	Image Writer
5. Printer speed.	9600	6. Stop bits.	1
7. Printer Width.	#0000		
8. Printer Init. String	\$_.....\$		

Select item, then press carriage return.

Escape - Main Menu.

Type number or use up/down arrows, then press RETURN.

Figure 3.6: The Apple Configuration Menu

Apple //c

You can only specify 1 or 2 but ensure the Port P.I.N. is properly configured. Use the Apple //c System Utilities to set up the P.I.N. and refer to Chapter 4 of the //c System Utilities Manual.

APPLE CONFIGURATION 2. COMMS CARD

Select from either of the two options which type of Comms interface you are using. Remember select NetComm for the Apple ACPC; select Super Serial for the Apple SSC on the //e, OR for the Apple //c.

"Warning": Make sure you have set up the comms slot and card correctly. VideotexII will not function correctly if they are not. One indication of this is if the program completely hangs or the cursor disappears. If you cannot return to the main menu by closed apple - If you may have to reboot.

APPLE CONFIGURATION 3. PRINTER SLOT/PORT

If you do not have a printer connected choose 0 from the item list.

"Warning": Make sure the Printer Slot/Port does not conflict with the Comms Slot/Port. VideotexII will warn you if this is the case and will not let you exit this menu until you correct it.

Apple //e

Choose 0, 1, 2, 4, or 5 as appropriate but remember Slot 1 is recommended. Check the printer interface really is installed in the slot you have specified.

"Warning": If you choose Slot 0 it means there is no printer connected or if you try to print while on line, no printing will be done. If you specify a wrong port or Slot VideotexII may hang.

"Warning": The interface you do use is presumed to be Apple Super Serial Card compatible. We recommend you actually use the SSC for the Printer connection.

Apple //c

Port 1 should be used to be consistent with the Comms port above and with all the //c documentation.

"Remember": Ensure the //c utilities have correctly configured the Port P.I.N. for the printer you intend to use.

APPLE CONFIGURATION 4. PRINTER TYPE

Both the currently available Apple printers are selectable as well as an option for most others which is called Custom (like do-it-yourself, OK?).

Select Imagewriter (the default selection).

If you select Custom then you must ensure you set the printer up correctly (see Printer Init. String below).

APPLE CONFIGURATION 5. PRINTER SPEED

The common speeds used are 1200 bps through to 9600 bps. For completeness the item list offers:-

50, 75, 110, 135, 150, 300, 600, plus
1200, 1800, 2400, 3600, 4800,
7200, 9600, 19.2K bps.

"By the Way": The default - factory - settings on Apple printers ex factory are:

Imagewriter 9600 bps

.....
"Warning": Make sure the SSC switches are set for printer mode as in Chapter 1.
.....

Clearly if you use 9600 bps, that is if you configure your printers DIP switches (see the Printer Installation Manual), then the time taken to send to the printer will be less, leaving VideotexII more time for the comms line.

"By the Way": Apple printers have a 2000 character buffer which means the screen dump at 9600 baud takes just 1.5 seconds but at 2400 bps takes about 7 seconds. The transfer time is not affected by the actual printer print speed.

APPLE CONFIGURATION 6. STOP BITS

Select the correct stop bit setting you have configured on your printer. The default setting is 1. This item is not significant for Apple printers; it is provided for Custom printers.

APPLE CONFIGURATION 7. PRINTER WIDTH

This option lets you enter into a numeric field the maximum width of the output you wish to print.

The default setting for width is 80, but this is immaterial for VideotexII, as it is printing in graphics mode.

APPLE CONFIGURATION & PRINTER INIT. STRING

You may enter any Hexadecimal characters in this field that your Printer and/or its SSC card requires to properly print your output. For example, you may request condensed font or enlarged font or different line spacings.

You should refer to your Printer manual and Reference Card to find the exact codes you should use. The information required here is in

Hexadecimal, that being the notation shown in the Apple SSC, Imagewriter and Letter Quality Printer Control sequences.

For example:

Condensed Font on an Imagewriter requires \$1B51\$. Refer to Chapter 4 of the Imagewriter User Manual.

MAIN MENU 9. QUIT

This option in the Main menu is used to quit or exit the VideotexII program. It uses the Apple ProDOS convention allowing the user (you) to type in, firstly, the **Volume Name** of the next program you plan to use, and then secondly, the **Path Name** of the System you wish to run.

There is no escape from this action other than to re-boot the VideotexII program.

.....
"Warning": You should use quit and not reboot for your own safety. VideotexII will warn you if there have been changes to the current configuration and ask you if you wish to save them. If you reboot there is of course no guarantee that your settings are saved.
.....

Chapter 4

USING VideotexII ON--LINE

THE TERMINAL CONTROL (ON-LINE) MENU

This Chapter describes the various facilities that VideotexII provides you when it is operating in Terminal Mode, that is, when it is On-Line.

HOW TO GET THERE

You have to be "on-line" before you can open the Terminal Control Menu and it is therefore only accessible after you have selected **TERMINAL MODE** or **DIAL AND CONNECT** from the Main Menu.

So, start the program and select the correct Configuration you need, (with its associated Terminal, Line, Phone/Modem and Apple details).

After you request **Terminal Mode** or **Dial and Connect**, VideotexII displays a series of messages.

First it notes:

```
***Loading Videotex Commware**
```

then either:-

```
***Loading Videotex Emulation Program**
```

or more likely it will **AUTO-DIAL** the connection first, in which case it displays:

```
"Dialling"
```

Your chosen telephone number appears, digit by digit, and you will see the enclosed reminder message as well, for example:-

"Dialling >>> VIATEL 0,,01955"

after which VideotexII displays:-

"Waiting for answer"

If the number is engaged or does not answer, a message:-

"Carrier lost or not detected"

is displayed. This refers to the high pitched carrier tone generated by the remote host modem, that your modem requires to make the connection.

If the number answers and Carrier is detected the VideotexII displays:-

"Call Answered"

and then

"Loading Videotex Emulation Program"

You are now connected on-line.

Enter your log-on code (or account code) as required by your host and then (if appropriate) enter the password.

GETTING ON-LINE HELP

The Terminal Control Menu provides a card format summary of all the On-Line VideotexII facilities you may call upon.

You can get this Terminal Control menu by typing, AT ANY TIME on-line, the combined keystroke.

"CLOSED APPLE" and "?" or
"CLOSED APPLE" and escape.

that is press the Closed Apple key (right hand side of the Space Bar) and while holding it down, press the "?" or ESCAPE key. Note that the OPEN APPLE and CLOSED APPLE keys function like a shift key in that they must be held down while pressing the other key.

This results in the display shown in figure 4.1.

Don't worry, your on-line terminal data is stored by the program and will be redisplayed for you when you are finished with the Terminal Control Menu.

The various facilities available are described in detail below, but cover:

- Send a "Break" signal to the Host.
Catalog the disk files on the current Volume.
- Return to the main menu program. Do NOT hang up.
- Open up a file to save the pages of information displayed on the screen.
Use the attached printer to selectively record pages received whilst on-line.
Read and redisplay pages of screens from the recording file.
leleload (download) software from host computers.
- Write the current page display away to the recording file.
Display data which has been marked as 'concealed'.
Utilities (as for Main Menu Utilities).

and finally:

- Quit out of the Terminal Mode back to the Main Menu. This will Hangup the phone and disconnect from the host.

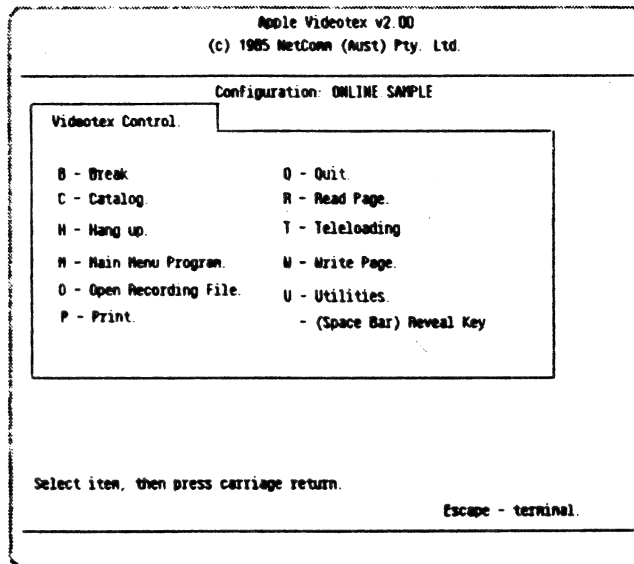


Figure 4.1: The Videotex Control (On-Line) Menu

Select the option you require with the arrow keys or the option letter (same character as the name) and Press Return. Some options give you a further menu; some, like transmit a Break signal, operate immediately and return you on-line.

When you have finished with any of the Terminal Control Options, Escape will return you to Terminal mode and VideotexII will repaint your screen with the data as you left it.

.....
"Warning": VideotexII buffers information sent down the line while you are in a terminal control menu. Data will eventually be lost if you are in the menu for too long. The NetComm card or ACPC has more capability for buffering than a SSC (4000 characters!).
.....

USING TERMINAL CONTROL OPTIONS DIRECTLY

Once you are familiar with the on-line options you will not need to use the Terminal Control Menu. You can go straight to the sub menus as follows. Note, they are the same characters as the menu shows in the help menu.

This means, type ... for

"CLOSED APPLE"-"B"	Send a <u>B</u> reak Signal
"CLOSED APPLE"-"C"	Display the <u>C</u> atalog
"CLOSED APPLE"-"H"	<u>H</u> ang Up
"CLOSED APPLE"-"M"	<u>M</u> ain Menu
"CLOSED APPLE"-"O"	<u>O</u> pen Recording File
"CLOSED APPLE"-"P"	<u>P</u> rint this Page
"CLOSED APPLE"-"Q"	<u>Q</u> uit
"CLOSED APPLE"-"R"	<u>R</u> ead Next Page
"CLOSED APPLE"-"T"	<u>T</u> eleloading Programs
"CLOSED APPLE"-"W"	<u>W</u> rite Next Page
"CLOSED APPLE"-"U"	<u>U</u> tilities Menu
"CLOSED APPLE"-" "	<u>R</u> eveal Key (Space Bar)

(From here-on we'll use "CA" to refer to the "CLOSED APPLE" key. This means, for example, "CA"-"P" means press "Closed Apple" and "P" at the same time.)

ACTUAL ON LINE USE OF THE TERMINAL

This section describes some of the basic terminal facilities that VideotexII provides when actually on-line.

Now that you've made your connection you need to get about and do things. That's really easy. There are a few simple Videotex commands you need to know to make life easy. These are not VideotexII instructions, they are commands to your Videotex host computer.

Videotex Commands

"By the Way:" With VideotexII the "#" is represented by the Carriage Return Key.

- *0# - Go to my directory page
- *90# - Go to my sign off page
- *# - Go back to the previous page viewed
- ** - Go back to the previous field (in a response frame)
- *00 - Repeat the last frame transmitted (to clear corruption from the line)
- *nn# - Go to page number nn.

One thing you'll notice pretty quickly is that when you select an option from one of the menus you often don't need to press Carriage Return or # or anything other than the option number. In most circumstances, Videotex responds immediately to your option selection.

As you get used to navigating your way around the pagestore you will learn the number of the particular page that you're looking for. You can go to it directly (using the "nn# command) or via the menu selections. However, you don't have to wait until the whole screen is completed before you select the next frame (if you already know what is coming up), just select the next menu option or enter a valid Videotex command.

"By the Way:" It is a general standard that routing paths (i.e. what do I press to get to the next frame?) are displayed on each screen, if not, the "#" key will generally keep you moving.

The Cursor

A square solid (non-blinking) cursor shows you where any data typed by you or received from the host will be displayed on the screen.

The program only displays the cursor if it is not busy doing other (more important) things for you, so sometimes (very occasionally) characters may appear without the cursor. As soon VideotexII can, it will display the cursor again.

Carriage Return

When you have typed the input required by the host, (possibly data, maybe commands) press Carriage Return to indicate you have completed that line of data.

A Videotex host is expecting the equivalent of the "#" key from a videotex terminal. VideotexII, when on-line, transmits that character when the Carriage Return key is pressed.

"By the Way:" Whenever you see your host asking you to hit the "#" key you need to only hit the Carriage Return key on your Apple.

TUTORIAL AND ON-LINE

Before you finish this chapter, read Chapter 5 and get some live experience of VideotexII, especially on-line.

You'll find this will help your understanding of the rest of this Chapter.

THE TERMINAL CONTROL MENU

Offers selection of eleven options which are described in detail below. See figure 4.2.

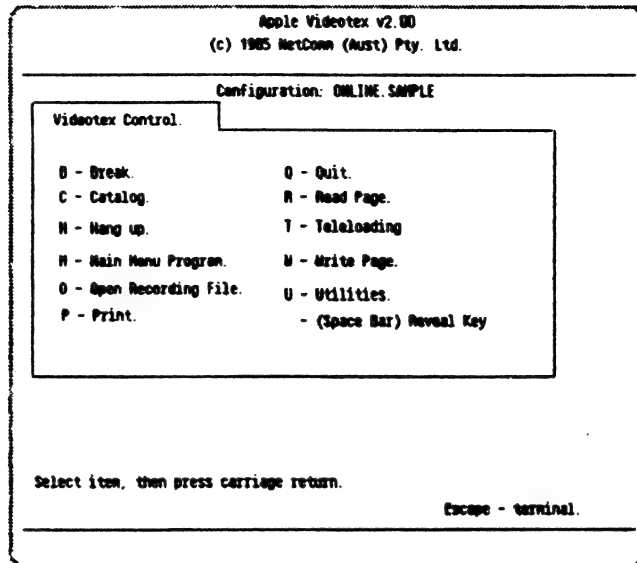


Figure 4.2: The Videntex Control Menu

If you select any option or if you are at the Terminal Control Menu, **Escape** returns you to Terminal (on-line) mode. Your data will be redisplayed.

TERMINAL CONTROL B - BREAK

Selecting this option sends a 250 millisecond break. This is a special signal sent down the line. Use this to get the attention of your host or to cancel out an activity they may have locked up on you.

Refer to the host support person for exact details of when (and when not) to use the Break.

"By the Way": "CA"-"B" sends Break immediately whilst on-line.

TERMINAL CONTROL C - CATALOG

You may use this facility directly when on-line by using "CA"-"C".

The Catalog of all files currently stored in the volume named in "Prefix" is displayed on the Screen.

Use this facility to check your file names for recording etc. The Current Prefix is displayed outside and above the Terminal Control Menu.

TERMINAL CONTROL H - HANG UP

This causes the modem to hang up by sending "+++" to an external modem and dropping the DTR signal for the In/Modem. This will not work with "other" modems or acoustic couplers.

TERMINAL CONTROL M - MAIN MENU

This option causes the main menu program to be reloaded. It does not hang up the line. You can subsequently come back to the terminal via terminal mode in the main menu. You will still be on-line. Use "CA"-"H" if you want to hang up before going back to main menu.

TERMINAL CONTROL O - Open Recording File

This option allows you to specify and open a file, into which videotex pages (directly from your screen) may be stored, for later review and or display.

You will see the following display:-

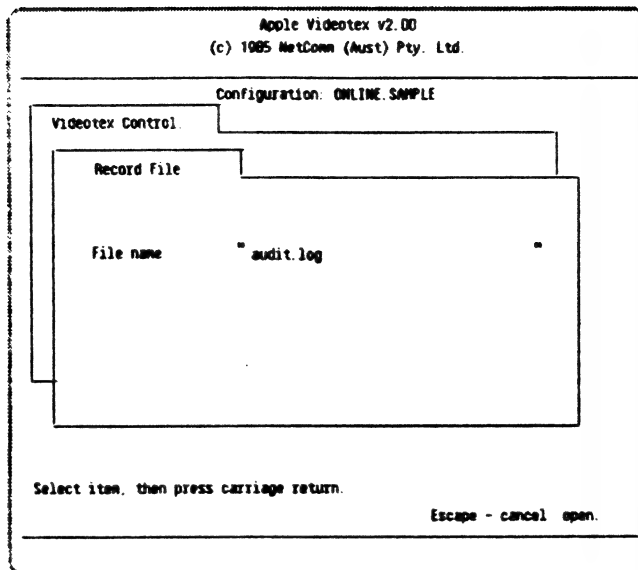


Figure 4.3 The Open Recording File Menu

The default file name "audit.log" will be opened on the current drive. If you wish it to be placed on another volume make sure you include the disk name before the file name. e.g. /PAGE.DISPLAYS/SAMPLES will store pages in the file SAMPLES on the disk /PAGE.DISPLAYS.

If you have a recording file open and open up a second file, the first recording file is closed so only one file is open at a time.

TERMINAL CONTROL P - PRINTER

You may select this from the Terminal Control Menu or directly from on-line with "CA"- "P". The printer is selected (if switched on) and will output the current screen display.

Warning: If your printer is powered off when you start to print your screen display then VideotexII will hang! Turn the printer on immediately or reboot your Apple to resolve the hangup.

TERMINAL CONTROL Q - QUIT

This option immediately returns you to ProDOS and terminates the on-line session. The modem will be "hung up". All open files (Audit, Receive etc.) will be closed.

Be sure you mean this.

Using "OA"--"CONTROL"--"RESET" achieves the same effect, except you will not be warned if you have changed any settings. Note that when you save, you save all parameters as currently set in both the Main menu and the On-line menu.

TERMINAL CONTROL R - READ PAGE

You may directly enter this sub-menu by using "CA"--"R", or by calling the on-line menu with "CA-?" then selecting "R - Read page".

This option allows you to recall pages which you have stored away, allowing you to review at your leisure information retrieved whilst on-line.

Make sure, of course, that you have opened a recording file (see Terminal Control O - Open Recording File) and that you have written the necessary pages out to disk (see Terminal Control W - Write Page) before trying to read pages.

TERMINAL CONTROL T - TELELOADING

Use "CA"-"T" to load software down from your mainframe. You will be able to execute these later. After selecting the Teleloading option this menu will be displayed:-

Apple Videotex v2.00
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Configuration: ONLINE.SAMPLE

Teleloading.

1. File Name	"teleload.file"	-
2. Access	Unlocked	
3. Open	Append	
4. Type	\$B4\$	5. Aux Type. \$0000\$

Select item, then press carriage return.

Escape - videotex.

Figure 4.4: Teleloading Menu

File Name

The default filename "teleload.file" will be opened on the current drive. If you wish it to

be placed on another volume make sure you include the diskname before the filename, e.g. /VIATEL.DATA/FREE.PROGRAM will store the program FREE.PROGRAM on the disk /VIATEL.DATA.

By The Way: Make sure you update the Open; Access; Type or Aux Type options (if you need to) before pressing RETURN to confirm the filename. VideotexII starts downloading software on confirmation of the filename.

Access

If you select Locked when the file is created it will be locked to avoid accidental deletion. the default is Unlocked.

Open

If you select Append, Teleload will append the new program to the current file, if it exists. If the file is not there a new file will be created. Overwrite will replace any program which already exists in that file.

Type and Aux Type

VideotexII will specify the ProDOS file type of \$041,\$0000\$ which is a normal text or ASCII file. These are the defaults and should only be changed after referring to the ProDOS Reference Manual.

Teleloading

When you hit RETURN to confirm the filename for your program the downloading process starts.

Escape at any time during the downloading will stop the teleload with the message "Teleload Cancelled" in the message area. Escape again will return to the videotex screen display. Progress of the teleloading is monitored by watching in the message area for the messages "Teleloading Block n" and "Storing Block n".

As each frame of the program is being received the "Teleloading Block n" message is displayed, and as the frames/blocks are written to disk the "Storing Block n" message is displayed.

To ensure the program being downloaded is not corrupted VideotexII calculates a checksum which it compares with one sent with each block of the program. If they are not the same the VideotexII requests the host to retransmit the corrupted block and displays the message "Retrying Block n".

If your host for some strange reason decides not to continue transmitting the program you requested VideotexII will display the message "Timeout on teleload". It has waited for 40 seconds without any response from the host.

Running Teleloaded Programs

If you're not familiar with the commands described below refer to the Applesoft Reference, the ProDOS Reference or the DOS manuals.

Now that you have saved the program of your choice you want to use it.

First of all you must logout of your videotex host. (Go to page 9 - "9#" - usually does the job). If your host hasn't hung up the phone, then you must, i.e. "CA" "H". Then, of course, you need to exit from VideotexII. "CA" "Q" will let you exit smoothly from the program.

Reboot your Apple with a ProDOS Startup disk (i.e. one with ProDOS and BASIC.SYSTEM on it). When you get the Applesoft prompt "]" you're ready to load in your teleloaded program.

Type in NEW to clear your computers memory of any old programs and then type in EXEC *filename*. *filename* is the name you typed in beside File Name in the Teleloading menu.

earlier. You should see a lot of "]"'s scroll up the left hand side of the screen and then stop.

At this stage the program is loaded into your Apple's memory. Type `SAVE filename2`. `Filename2` is the name you want to call that program. The program will be saved on your disk as a BASIC type file. From now on you will be able to use it by typing in `RUN filename2`.

Type in `CAT`, to check that the program really has been saved as a BASIC type file.

Now for the fun, type in `RUN` and let your newly acquired program show its form

For Your Information: The bad news is that a lot of the programs that you teleload will probably be Apple DOS 3.3 programs. There are differences between Applesoft BASIC programs developed for DOS 3.3 and ProDOS. If you don't want to convert the DOS 3.3 programs to ProDOS then you will have to copy the programs to DOS 3.3 disks. HINT: You should be able to do this using the "Change Disk Format" option on the ProDOS System Utilities Disk.

TERMINAL CONTROL W - WRITE PAGE

Use "CA" - "W" directly or enter this option from the Videotex Control menu.

This selection stores the current videotex frame being displayed out to an opened recording file. You must have opened this recording file using the "CA" - "O" command or selected the "O - Open Recording File" from the Videotex Control menu.

The pages stored using the "CA" - "W" command can be viewed again later, (see the "CA" - "R" command).

"By the Way": If you know you want to store many pages, or you want to keep you page stores together then have several ProDOS initialised disks ready to make sure you have plenty of space.

TERMINAL CONTROL U - UTILITIES

A duplicate copy of the Main Menu utilities is provided for your use whilst on-line. Read the section above for the use of each Utility.

Chapter 5

TUTORIAL & SELF HELP

This chapter presents a tutorial on how to use VideotexII from the beginning.

It takes you step by step through the basic procedure to set up your first Terminal Configuration and then run it, on-line.

It will help if you read Chapter 1 closely and skim quickly through Chapters 2-4 first.

At the end of this chapter you will be completely familiar with the operation of VideotexII main menu facilities and you will be able to dial, connect and log-on to a remote Videotex host.

HERE'S WHAT'S COVERED

A. Getting Started

1. Checking the Hardware
2. Checking the Remote
3. Let's Get Going
4. Creating Your Configuration
5. Checking and Changing Part of Your Configuration
6. Checking and Changing the Phone/Modem
7. Checking the Apple Hardware
8. Saving Your New Configuration

B. Dialling and Connecting

1. RUN the Terminal
2. Auto Dial
3. Manual Dial
4. Logging On
5. Logging Off
6. Quitting the Program

C. What To Do If It Doesn't Work

A. GETTING STARTED

In this section you'll check you've got all you need to go on-line with VideotexII.

A1 CHECKING THE HARDWARE

"Warning": Make sure the Apple is powered off if you insert or remove cards from the slots.

Answer this checklist:-

- * Have you got a backup copy of VideotexII?

If not, check the ProDOS Manual or the Utilities Manual on how to format and copy a disk.

- * What sort of Comms Card is installed; what slot is it in?

Open the Apple and check. Slot 2 is suggested. Don't open up a //c!! Just ensure your modem is connected to the Comms Port (Port 2).

- * Is a printer connected? What slot is its interface card installed in?

The printer should be connected to an Apple Super Serial Card. It should be in Slot 1 (the printer should be connected to Port 1 for the Apple //c).

- * Is the modem correctly connected to the Comms Card?

Check the modem manual supplied. Make sure all the cables are firmly connected.

- * Is the modem phone connection plugged in?

Lift up the handset and see if you hear the dial tone. If not call your support person or check with Telecom if the phone plug is correctly connected.

A2. CHECKING THE REMOTE

- * Have you got the details of the remote host or microcomputer?
- * You need some or all of the following:
 - phone number
 - account codes & passwords
 - terminal identifier.

Run through the checklist in Appendix E with your support person. Do this now.

A3. LET'S GET GOING

- * Put the VideotexII program disk in the "boot" drive and turn the power on.

The "boot" drive is the one the Apple

reads, looking for a program when you turn the power on.

Note: If the power is already on, use CONTROL-OPEN APPLE-RESET. (To do this press "CONTROL", hold it down, press "OPEN APPLE" (left of the space bar) and still holding them down press "RESET". All three keys at once!

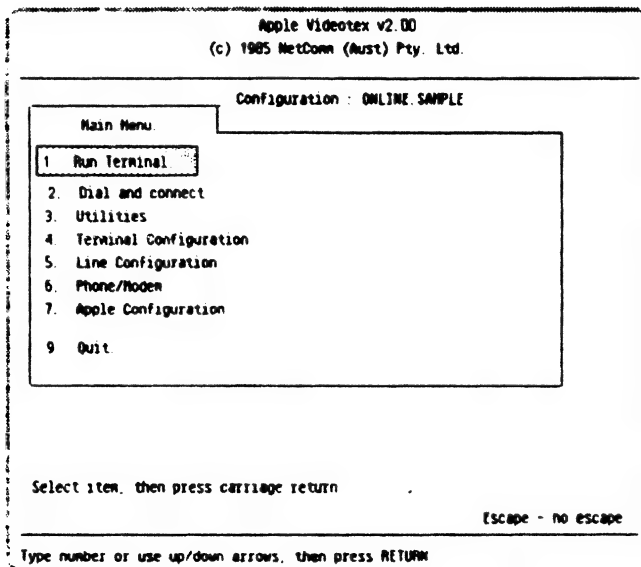


Figure 5.1: Main Menu

The disk will "whirr"
and after about 10
seconds you should see
a flash screen
advertising the
program and after
about another 25
seconds you will see
Figure 5.1 The Main
Menu, on the screen.

A4. CREATING YOUR CONFIGURATION

This section shows you how to change to a new
configuration whose name you will type in.

- 4.1 VideotexII has
already selected
a configuration
file called
"ONLINE.SAMPLE".

This contains a series
of standard settings
("default" settings)
that you can change
but probably won't
need to.

- 4.2 Choose a new name
for this, your first
configuration.

How about
"FIRST.ONE".

To create your name
you must select the
Utilities menu.

- 4.3 Type the number "3"
or press the down
arrow key twice.

Notice the cursor
moves down and
highlights
"Utilities".

4.4 Now press RETURN.

This confirms you do wish to open the Utilites/Menu.

VideotexII displays the Utilities Menu card overlaid on top of the Main Menu.

It is showing two names, one the current Configuration, **ONLINE.SAMPLE** and the second the current Prefix **/VideotexII/CONFIGURATIONS**. This is the sub-directory in which your new configuration will be saved.

4.5 Type the number "2" then press RETURN.

You could use the down arrow instead of the "2". You have selected the Change option of Utilities. The cursor is now alongside Change.

HELP??

If you get lost, press the ESCAPE key a few times. You'll go back to the start of Step 4. If you get really stuck re-boot - see step 3.

4.6 Now type in the new name you wish to create.

DON'T type any slashes inside the name. For now keep your life nice and simple. Did

you use "FIRST.ONE"?
No problem if you
didn't, just make sure
you remember the name.
You can use upper
and/or lower case
characters. Either
will do but only use
Alpha and Numeric
characters.

When you are finished
press RETURN.

The disk whirrs. The
VideotexII program is
checking if
"FIRST.ONE" (or
whatever) is really a
new name.

It should come back
and display in the
bottom of the screen
(left side) "new file
created, current
settings used".

The cursor is back on
the left column of the
menu, highlighting
Delete. Don't worry.
This is normal.

4.7 Now press ESCAPE.

This takes you back to
the Main Menu. Notice
your configuration
name is now on
display.

A5. CHECKING & CHANGING PART OF YOUR CONFIGURATION

5.1 Press the down arrow
one time.

You have selected
Terminal
Configuration. You
could have pressed the
number "4" instead.

Now press RETURN.

This is what you should see: -

The screenshot shows a terminal window titled "Apple Videotex v2.00" with a copyright notice "(c) 1985 NetComm (Aust) Pty. Ltd." at the top. Below this, it says "Configuration : ONLINE SAMPLE". The main menu is titled "Main Menu" and contains the following items:

- 1. Char Delay. No Delay
- 2. CR Delay. No Delay
- 3. LF Delay. No Delay
- 4. FF Delay. No Delay
- 5. User Identification "....."

At the bottom of the menu, there are instructions: "Select item, then press carriage return." and "Escape - Main Menu." Below the menu, there is a line of text: "Type number or use up/down arrows, then press RETURN".

Figure 5.2: Terminal Configuration
Just check the contents of this menu.

5.2 Move the cursor

down through the list by pressing the down arrow key a few times.

ESCAPE will return you to the Main Menu at any time.

Select item 5 "User Identification", then press RETURN.

See below the menu card? You are being asked to type in your User number, so that the videotex host can recognise you automatically. Type it in, then RETURN.

5.3 Now press ESCAPE

You should be back at the Main Menu. OK? If not, hit some more ESCAPES.

5.4 Now press the number "5". Press RETURN.

This selects the Line Configuration Menu.

Is the speed setting correct? If not press "1" then RETURN.

Now you see the item list displaying the speed selection. There are dual cursors both showing 1200/75 bps. This "default" speed should be OK. However, try changing the speed, as a practice. The only one you may need to change is "speed".

Use 1200 for the Apple
Modem 1200 and 1200/75
for the NetComm
Communications
Protocol Card.

A6. CHECKING & CHANGING THE PHONE/MODEM

This section shows you how to change the Phone number and how to specify the make of modem you are actually using.

If you are not at the Main menu level press ESCAPE a couple of times.

- 6.1 Open the Phone/Modem Menu; to do this type "6", then press RETURN.

Fig 5.3 shows what you should see.

Note: Your configuration name should be on display at the top. The cursor should be highlighting Phone Number.

Do you have a NetComm
In/Modem?

If "Yes" read on.

If "NO" skip to
step 6.4 below.

Apple Videotex v2.00
(c) 1985 NetComm (Aust) Pty. Ltd.

Configuration : ONLINE SAMPLE

Main Menu.

Phone/Modem

1. Phone number	"Viatel 9..01955	"
2. Modem Make	In/Modem	
3. Dial Type	Pulse	
4. Modem Type	CCITT	
5. Modem Slot	4	
6. Answer/Originate	Originate	

Select item, then press carriage return.

Escape - Main Menu.

Type number or use up/down arrows, then press RETURN.

Figure 5.3: Phone/Modem

6.2 AUTO-DIAL In/MODEM

Press RETURN once.
The "Sample number"
should now be
highlighted.

Are you going to
use Auto Dial?

(Do you want the
VideotexII program to
dial for you when you
tell it to RUN?)

If "Yes", read on.

If "No", skip to
step 6.3.

Type in a name that
will help you
remember who the

number belongs to.

(You don't have to do this if you don't wish!)

Then type in the phone number.

Notice how the cursor moves, overwriting the old number with your new one.

N.B. If you are dialling out through a switch-board put the "outside line" code first (usually you will type "9" or "0")...

Note: At any time Escape will "undo the change". Try it and go back to the start of 6.2.

Add one or two commas....

They tell the modem to pause for 1 second per comma to let the modem connect to the outside phone network.

Then type in the phone number.

You should now see a Phone number something like "MY.GD 9,,01955"
or
"FIRST.NUMBER 1234567"

Use spaces, they make it easier to read.

Press RETURN.

The cursor should move over to the left highlighting **Modem** **Make.**

Skip to step 6.5

6.3 MANUAL DIAL (ALSO HOW TO DELETE A NUMBER)

Type one blank space.

Then press RETURN.

The Phone Number will be erased. When you **DIAL & CONNECT** VideotexII now it will not try to Auto Dial and you will need to follow the instructions in your modem manual on how to dial.

ESCAPE will undo your change, if you press it before RETURN.

Skip to step 6.5

6.4 What Modem Type Have You Installed (or Connected)?

If it's an In/Modem, skip to 6.5.

For Apple, Hayes or Other modems you should enter the number you wish to dial. Read the Modem manual.

... First, you should select the Modem Make.

Press "0" then RETURN.

Select the make of modem you have connected with the Right Arrow key ...

ESCAPE is your safety
escape.

... then press RETURN.

If you have selected
Apple or Hayes or
Other, items 5 to 7
have been removed.
They don't apply any
more.

Now select the Phone
number option.

Press "1" then
RETURN, now type
your phone number
for example...
"01955"
then press RETURN.

- 6.5 Now you should have
correctly entered
your number
or deleted it to
let you dial
manually.

All other details in
the Phone/Modem Menu
are OK for normal
use of the In/MODEM
in Australia. Move
onto the next section.

Press ESCAPE to exit
the Phone/Modem Menu
and return to the
Main Menu.

A7. CHECKING THE APPLE HARDWARE

This section tells you how to check the Apple's
physical configuration is correctly specified
to the VideotexII program.

7.1 You should be in the
Main Menu.

Press ESCAPE a few
times if you are not.

Type "7" then press
RETURN.

The Comms port/slot
should be left at "2";
only change it if you
have installed your
Comms Card in a
different slot.

Have you selected
the correct Comms
Card type?

If "No" then press "2"
then RETURN. Use
the right arrow to
select the card you
have installed followed
by RETURN.

Don't worry about the
printers for now.

Press ESCAPE and
return to the
Main Menu.

A8. SAVING YOUR NEW CONFIGURATION

You should be at the
Main Menu.

Type "3" and press
RETURN.

This selects
Utilities.

Press RETURN again.

The disk whirrs as
VideotexII saves your
configuration.

Go back to the Main
Menu.

Press ESCAPE.

B. DIALING & CONNECTING

In this section you'll see how you instruct the VideotexII program to start up, dial for you (if that's what you requested in the Phone/Modem menu above), and go on-line to the remote host.

"Hint": If you are at all concerned, try a number of "dry runs" of this whole procedure. Disconnect the phone plug and follow each step carefully and closely. When you are confident, plug in the phone plug and try it live.

B1. TERMINAL MODE

You should be at the
Main Menu.

Press "1" to move the
cursor to "Terminal
Mode" and then press
RETURN.

You will see this:

"DIAL AND CONNECT NOW"

then you will see: -

LOADING VIDEOTEX COMMSWARE

LOADING VIDEOTEX EMULATION PROGRAM

B2. AUTO DIAL

- 2.1 Select "2 DIAL AND
CONNECT" in the main
menu. Press RETURN.

You will see the same
messages as for
"Terminal Mode", but
also a dialling
message, "DIALLING>>",
will be displayed
while the modem dials
the number.

After this you will see:

"WAITING FOR ANSWER"

VideotexII will wait
approximately 20
seconds for the remote
computer to answer the
phone.

- 2.2 Then you should see ...
"ANSWERED"

and then ...

LOADING VIDEOTEX EMULATION PROGRAM

then the screen clears
and you see ...

The signon/logon
screen displayed by
your videotex host.

If you entered a
User Identification
number at step 5.2
this will now be
transmitted.

You are almost
On-line. Go to step
4 below.

2.3 Sometimes you will see ...

"MODEM IS IN VOICE MODE"

(You are back at the
Main Menu, too!)

You forgot to set the
In/MODEM switch from
VOICE to DATA

Select the correct
Modem switch setting
and then ...

Press RETURN again.

Go back up to step B2.

2.4 Sometimes you will
see ...

"CARRIER LOST OR NOT DETECTED"

(You are back at the
Main Menu)

This means the remote
computer didn't answer
the phone, or did so
but didn't send ITS
modem signal.
VideotexII hangs up
the line after 20
seconds.

Press RETURN to
re-dial immediately
or wait 5 minutes or
so and try again.

Go to step B1.

B3. MANUAL DIAL

You really need to check your modem manual to complete this part of the tutorial. What is detailed below is really a checklist. Some modems do require different procedures, but the basic principle is the same.

3.1 After the ...

LOADING VIDEOTEX EMULATION PROGRAM

message, the screen
was cleared and the
cursor appeared in the
top left hand corner.

The terminal is now
"live" but "off-line".

- press the Data
Button or ...
- switch from Voice
(Line, or Phone,
or Manual) to Data
(or Modem or Auto-
matic) or ...
- put the handset in
the Acoustic
Coupler.

The correct procedure
is detailed in your
modem manual.

Now you should be on-line.

B4. LOGGING ON

Each host or service has a different "log-on" procedure. Again you will need to review the correct sequence of steps and (as advised above) you will need a valid and current Account code or I/D plus Passwords etc. Keep a note of these in a Safe Place. Hide your Password. (See the WAR GAMES Movie?)

4. Most hosts will type a message requesting you enter a user number.

You would answer with the response detailed by your host's representative (normally a 5 or 6 digit number) followed by RETURN, if VideotexII didn't automatically respond.

4.2 After the user number you will be prompted to enter your password.

Type carefully and slowly - no need to hurry.

Press RETURN at the end.

- 4.3 Good Luck, You're on-line now!

B5. LOGGING-OFF

This is how you get off-line! Follow the instructions of your host to tidily exit their computer system.

If all else fails ...

- 5.1 Press "CLOSED APPLE" and "Q" simulatenously.

This is one of the various on-line VideotexII commands, Q=QUIT.

Read Chapter 5 for more detail but the result is that, within

about 5 seconds,
VideotexII will "hang
up" the line and
return you to the Main
Menu.

- 5.2 If all else fails
(it won't) remember,
Turn off the Apple!!
(Also the modem if you
have an Apple modem or
Hayes)

You have ultimate
power and the host
will not be unduly
concerned. It will
look like the phone
connection was
prematurely
terminated.

B6. QUITTING THE PROGRAM

(This is only if you
are in the Main Menu.)

Press "9" to select
the Quit option in
the Main menu.

Press RETURN to
confirm.

What follows is the
normal ProDOS
procedure. If you are
familiar with this
continue.

If not re-boot or
power-off. This will
not cause any harm.

HAPPY VIDEOTEXING! !

C. WHAT TO DO IF IT DOESN'T WORK

C1. FIRST, DON'T WORRY

- * Ensure the phone line has properly disconnected (hung up).

Read the modem manual on how to check if the phone is OK for voice conversations. (The In/MODEM lets you switch from "DATA" to "VOICE".)
- * Carefully review what happened.

C2. NO CONNECTION MADE??

- * Follow your steps through this Tutorial but specifically ...

Can you hear a dial tone now?
- * Check the cable connections from the modem to the Comms Card.
- * Check the phone line plug is connected.

Check the line connection unit is correctly connected to the modem.

Remember, turn off the power first.
- * Check the details you have now got saved in your configuration

("FIRST.ONE" or whatever), especially the Line Configuration. (Speed, parity, no. bits, no. stop bits etc.)

Review these with your host support person or Apple dealer.

- * Check the Phone number. If you dial (now! manually!) can you hear the other end modems' Carrier Tone when the phone answers?

If not, phone your host support person. Maybe the remote computer is down (not working).

C3. CONNECT BUT ...??

If the line "answered" but you couldn't log-on or if no data at all came down the line ...

- * Is you log-on procedure correct?

Check with the host support person. You may need to type a special character to get the remote computer to respond.

- * Once again, check if you've got the correct

By "correct" we mean the same setting as the other computer!!

- modem type
- "Originate" or "Answer Mode"

The modem should be.... CCITT, Full (MODEM) Duplex, Originate, Pulse dial in Australia with the capability to run at the 1200/75 baud rate.

If any of the above are not consistent with the other end, when the remote modem answers the two modems won't be able to complete their "handshake".

C4. THE NEXT STEP ...

Review Chapter 6.
Troubleshooting Guide.

... or 'phone your
Apple Dealer or
Central Computer
Support Person.

Chapter 6

TROUBLESHOOTING GUIDE

If you're having trouble communicating with the host, use this Chapter to help pinpoint the cause of the problem and solve it.

Which selection of this Chapter you should read depends on whether your installation has never worked, whether it previously worked with the same host but now doesn't, or whether it previously worked with a different host.

IF THE INSTALLATION NEVER WORKED

Any of these things could be causing the problem; the telecommunications line, the Apple hardware, the Configuration (and other) details setup, or the quality of the phone line.

TELECOMMUNICATIONS LINE CHECKLIST

If you're using a switched (dial) telephone line, check these things to find out if the problem is in the telecommunications line (that is, at the host, either of the modems, or telephone line):

- Is the host down? Is the host modem working? Is a port on the host available? The usual indication is a ringing phone with no answer.
- Is the modem set up for Bell or CCITT standards? In Australia it should be CCITT. Have you set up the modem compatible with the host modem? Ask the systems programmer or on-site support person.
- Are you calling the correct phone number for the host? (Call the number and listen for the characteristic tone signal. If a

person answers, maybe you've got the wrong number!)

After you've installed your modem, can you still make a voice phone call from your attached handset?

Is the modem LCU switch set to "VOICE" ("Manual" or "Phone") when it should be "DATA"? ("Automatic" or "Line".)

If you're using automatic dialling, check to make sure that it's the correct number. Check that a dial tone is present first.

Check the carrier indicator (referred to often as CD or DCD on the modems control panel). The light should be On permanently when connection is established.

HARDWARE CHECKLIST

Check these things to find out if the problem is in the Apple or the serial interface hardware:

Run the Internal Test, if your serial interface has one. The NetComm Card and Apple ACPC/UCPC have them.

Run the Modem Test. (In/MODEM) Set Hardware switch 4 (TEST) on the modem switch block On. Use your communications package normally. Anything you type in will be reflected back to the screen. This proves that the serial interface, cables and In/MODEM are all working correctly. Both Apple and Hayes modems also have self test facilities.

CONFIGURATION DETAILS CHECKLIST

Check these things to find out if the problem is in the way to set up your Configuration details:

- Ensure your configuration details are exactly compatible with your remote host. Particularly check the speed.
- Make sure you have specified the correct comms card and slot and the correct printer slot.

PHONE LINE QUALITY CHECKLIST

Check these things to find out if the problem is due to a poor quality telephone line:

If you're using a switched (dial) telephone line, check if the phone line is "noisy".

Some phone line problems that effect high speed modems are imperceptible to the human ear. The symptoms of such phone line problems are lots of errors and poor communication with a variety of hosts. If you encounter these problems, hang up and dial again. If these problems persist, then contact Telecom to solve them.

IF THE INSTALLATION WORKED BEFORE WITH THE SAME HOST

Any of these things could be causing the problem: the telecommunications line, the hardware, the session and file details setup, the quality of the phone line.

Check these first then the list above in "If the Installation Never Worked".

TELECOMMUNICATIONS LINE CHECKLIST

Is the host down?

Are you calling the correct phone number for the host?

Check to make sure that a dial tone is present.

Has anyone changed your configuration settings? Is the modem switch in VOICE and not DATA?

HARDWARE CHECKLIST

Check these things to find out if the problem is in the serial interface hardware:

Run the Internal Test, if your serial interface has one.

Run the Modem Test if there is one.

CONFIGURATION DETAILS CHECKLIST

Check these things to find out if the problem is in the way you set up your session or file details:

Check your Configuration details carefully. Has anyone changed them? Is you Apple configured differently?

PHONE LINE QUALITY CHECKLIST

Check these things to find out if the problem is due to a poor quality telephone line:

Check if the phone line is noisy.

IF THE INSTALLATION WORKED BEFORE WITH A DIFFERENT HOST

Check all of the steps listed in the sections under "If the Installation Worked Before with the Same Host". In addition to this, check particularly that your modem is compatible with the host modem.

Appendix A

DATA COMMUNICATIONS GUIDE FOR BEGINNERS

Here is a brief summary of key data communications concepts that you should understand.

EQUIPMENT

Data Communications is the exchange of information between two or more locations. Typically, one of the locations is a computer and the other locations are computer terminals. In the case of the Apple, both locations - the Apple and the host - are computers.

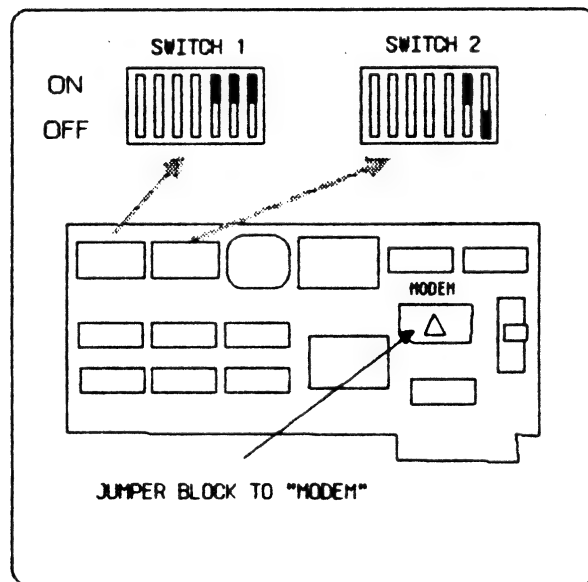


Figure 1-1: Connection to a Host.

When connection is via a modem,

The modem converts the digital data that comes to it from the computer into analog (sound) signals that can travel over the telephone lines, and converts the analog signals that come to it from the telephone lines into digital data that can be received by the computer.

Telephone lines carry the data, in the form of analog (sound) signals, from one modem to another. The telephone lines may be standard (switched), leased, or privately owned. This includes the new AUSTPAC service.

PROTOCOLS

There are several sets of rules for how to communicate with the host. Each set of rules is called a protocol. The protocol determines how data is sent across the communications line between two locations. The Apple is able to communicate with the host by emulating (imitating) the protocol used by terminals normally connected to the host. The signal coming from the Apple then looks like the signal from any other terminal.

Asynchronous protocols generally transmit the data as it is entered from the keyboard. "Bits" are wrapped around the data to tell the modem to start (prepare) for the character to come, and to stop (and wait) for the next.

Some protocols communicate interactively, others transfer files. When you use an interactive protocol, each character is transmitted as you type it or when you press RETURN or ENTER.

When you use file transfer protocols, you must prepare the data in advance and save it in

files on disk, then transmit them in batches to the host.

You can use file transfer protocols to send one or a series of files from one personal computer to another. The data in each file must still be prepared in advance by your word processor, spreadsheet or database program.

With synchronous protocols, the equipment at both ends of the communications line must synchronize with each other before data can be transmitted or received. This makes it possible for the equipment at the receiving end to distinguish individual data bits in the continuous stream of data sent by the equipment at the other end.

Which protocol you should use depends upon the host or Personal Computer that you plan to communicate with. Ask the on-site systems programmer, technical support person or the user at the other end to tell you which protocol to use. You may have a choice of protocols, in which case use the one that is required for the type of work you want to do. Make sure each end uses the same protocol.

Appendix B

CABLE CONNECTIONS

You need not concern yourself with this Appendix if you have a NetComm Apple In/MODEM.

If you have an Apple Modem 1200 you should use the appropriate cables in the Modem accessory kit for your type of Apple.

The cable from the Serial Interface card sends signals to and also responds to signals sent to it from the modem. These signals conform to the international RS232 standard (CCITT V.24).

In order for you to properly connect to the modem your cable connection must be configured as per Figure B-1, i.e., the pin connections must exactly correspond. The modem cable must be terminated at the Communications Card with a female DB25 configured as a DTE.

The cable connections on the NetComm Card (and the Apple Communications Protocol Card etc.), are properly configured. The Apple Super Serial Card is configured for Asynchronous use only. They both are provided with the correct DB25 connector type.

If you make your own cable ensure it complies with the connections shown below.

PIN	FUNCTION
2	TRANSMIT DATA (TXD)
3	RECEIVE DATA (RXD)
4	REQUEST TO SEND (RTS)
5	CLEAR TO SEND (CTS)
6	DATA SET READY (DSR)
7	EARTH (GND)
8	CARRIER DETECT (CD & DCD0)
20	DATA TERMINAL READY (DTR)

Figure B-1: Signals Supported by the RS232 Cable Connection at the Communications Card end.

Appendix C

ERROR MESSAGES

PART 1 - ProDOS MESSAGES

The following is a list of the Apple ProDOS error messages which VideotexII may occasionally display.

These messages are used in their ProDOS format and you should refer to the ProDOS Technical Reference manual, Chapter 4 for more detailed explanations.

ProDos Error Messages

- "Bad system call number"
- "Bad system call parameter count"
- "Interrupt vector table full"
- "I/O error"
- "No device connected/detected"
- "Disk write protected"
- "File not open"
- "Disk switched"
- "Invalid pathname syntax"
- "Character file control block full"
- "File control block table full"
- "Invalid reference number"
- "Path not found"
- "Volume not found"
- "File not found"
- "Duplicate filename"
- "Disk is full"
- "Directory full"
- "Incompatible file format"
- "Unsupported storage type"
- "End of file"
- "Position out of range"
- "Access error"
- "File is open"
- "Directory error"

- "Not a ProDOS disk"
- "Invalid parameter"
- "Volume control block table full"
- "Bad buffer address"
- "Duplicate volume"
- "Bit map disk address is impossible"

PART 2 - MODEM MESSAGE

"Modem Connected"

Self Explanatory

"Carrier Lost or not Detected"

The modem has waited 30 seconds and has not been able to get an answer or has got an answer which did not produce the correct (required) answering carrier tone.

"Modem is in Voice Mode"

Self explanatory

"Tone Dialling not Supported"

Your modem does not support this facility.

Appendix D

ASCII DATA TRANSMISSION CODES

The computer translates each key that you press on its keyboard and each character that controls the communication of data or the display of data into a **binary digit**, or bit, pattern of 1's and 0's. The binary digits that a particular key or character is translated into depends upon the code that the computer uses.

Most computers use one of two codes to translate the keys: **ASCII** (AMERICAN STANDARD CODE for Information Interchange) or **EBCDIC** (Extended Binary Coded Decimal Interchange Code).

Table D-1 gives the ASCII notation for each key or character. It shows the key or character, what the key or character means (if it's not a letter, number, or special character), and its ASCII translation into 7-bit binary, decimal and hexadecimal numbers.

Here's how to interpret this table:

- The Binary column has the 7-bit code for each ASCII character.
- The Low Dec column gives the decimal equivalent of the 7-bit binary value. This value is the same if the binary code has 8 bits and the high-order bit is 0.
- The Low Hex column gives the corresponding hexadecimal value.

- The Hi Dec column gives the decimal equivalent of the 7-bit binary value if a high-order bit equal to 1 is appended to it; for example, 11001000 for the letter H.
- The Hi Hex column gives the corresponding hexadecimal value.
- The ASCII Char column gives the ASCII character name.
- The Meaning column spells out the meaning of special symbols and abbreviations where necessary.

TABLE D-1 - ASCII Codes

7 bit Binary	Low Dec	Low Hex	Hi Dec	Hi Hex	Char	ASCII Meaning
0000000	0	00	128	80		NUL Blank (null)
0000001	1	01	129	81		SOH Start of Header
0000010	2	02	130	82		STX Start of Text
0000011	3	03	131	83		ETX End of Text
0000100	4	04	132	84		EOT End of Transmission
0000101	5	05	133	85		ENQ Enquiry
0000110	6	06	134	86		ACK Acknowledge
0000111	7	07	135	87		BEL Bell
0001000	8	08	136	88		BS Backspace
0001001	9	09	137	89		HT Horizontal Tab
0001010	10	0A	138	8A		LF Linefeed
0001011	11	0B	139	8B		VT Vertical Tab
0001100	12	0C	140	8C		FF Form Feed
0001101	13	0D	141	8D		CR Carriage Return
0001110	14	0E	142	8E		SO Shift Out
0001111	15	0F	143	8F		SI Shift In
0010000	16	10	144	90		DLE Data Link Escape
0010001	17	11	145	91		DC1 Device Control 1
0010010	18	12	146	92		DC2 Device Control 2
0010011	19	13	147	93		DC3 Device Control 3

0010100	20	14	148	94	DC4 Device Control 4
0010101	21	15	149	95	NAK Negative Acknowledge
0010110	22	16	150	96	SYN Synchronization
0010111	23	17	151	97	EIB End of Text Block
0011000	24	18	152	98	CAN Cancel
0011001	25	19	153	99	EM End of Medium
0011010	26	1A	154	9A	SUB Substitute
0011011	27	1B	155	9B	ESC Escape
0011100	28	1C	156	9C	FS File Separator
0011101	29	1D	157	9D	GS Group Separator
0011110	30	1E	158	9E	RS Record Separator
0011111	31	1F	159	9F	US Unit Separator
0100000	32	20	160	A0	SP Space
0100001	33	21	161	A1	!
0100010	34	22	162	A2	"
0100011	35	23	163	A3	#
0100100	36	24	164	A4	\$
0100101	37	25	165	A5	%
0100110	38	26	166	A6	&
0100111	39	27	167	A7	' Closing Quote
0101000	40	28	168	A8	(
0101001	41	29	169	A9)
0101010	42	2A	170	AA	*
0101011	43	2B	171	AB	+
0101100	44	2C	172	AC	, Comma
0101101	45	2D	173	AD	- Hyphen
0101110	46	2E	174	AE	. Period
0101111	47	2F	175	AF	/ Slash or oblique
0110000	48	30	176	B0	0
0110001	49	31	177	B1	1
0110010	50	32	178	B2	2
0110011	51	33	179	B3	3
0110100	52	34	180	B4	4
0110101	53	35	181	B5	5
0110110	54	36	182	B6	6
0110111	55	37	183	B7	7
0111000	56	38	184	B8	8
0111001	57	39	185	B9	9
0111010	58	3A	186	BA	:
0111011	59	3B	187	BB	;
0111100	60	3C	188	BC	<
0111101	61	3D	189	BD	=
0111110	62	3E	190	BE	>

0111111	63	3F	191	BF	?
1000000	64	40	192	C0	@
1000001	65	41	193	C1	A
1000010	66	42	194	C2	B
1000011	67	43	195	C3	C
1000100	68	44	196	C4	D
1000101	69	45	197	C5	E
1000110	70	46	198	C6	F
1000111	71	47	199	C7	G
1001000	72	48	200	C8	H
1001001	73	49	201	C9	I
1001010	74	4A	202	CA	J
1001011	75	4B	203	CB	K
1001100	76	4C	204	CC	L
1001101	77	4D	205	CD	M
1001110	78	4E	206	CE	N
1001111	79	4F	207	CF	O
1010000	80	50	208	D0	P
1010001	81	51	209	D1	Q
1010010	82	52	210	D2	R
1010011	83	53	211	D3	S
1010100	84	54	212	D4	T
1010101	85	55	213	D5	U
1010110	86	56	214	D6	V
1010111	87	57	215	D7	W
1011000	88	58	216	D8	X
1011001	89	59	217	D9	Y
1011010	90	5A	218	DA	Z
1011011	91	5B	219	DB	[Opening Bracket
1011100	92	5C	220	DC	\ Reverse Slant or Back Slash
1011101	93	5D	221	DD] Closing Bracket
1011110	94	5E	222	DE	Caret
1011111	95	5F	223	DF	Underline
1100000	96	60	224	E0	" Opening Quote
1100001	97	61	225	E1	a
1100010	98	62	226	E2	b
1100011	99	63	227	E3	c
1100100	100	64	228	E4	d
1100101	101	65	229	E5	e
1100110	102	66	230	E6	f
1100111	103	67	231	E7	g
1101000	104	68	232	E8	h
1101001	105	69	233	E9	i
1101010	106	6A	234	FA	j

1101011	107 6B	235 EB	k
1101100	108 6C	236 EC	l
1101101	109 6D	237 ED	m
1101110	110 6E	238 EE	n
1101111	111 6F	239 EF	o
1110000	112 70	240 F0	p
1110001	113 71	241 F1	q
1110010	114 72	242 F2	r
1110011	115 73	243 F3	s
1110100	116 74	244 F4	t
1110101	117 75	245 F5	u
1110110	118 76	246 F6	v
1110111	119 77	247 F7	w
1111000	120 78	248 F8	x
1111001	121 79	249 F9	y
1111010	122 7A	250 FA	z
1111011	123 7B	251 FB	{ Opening brace
1111100	124 7C	252 FC	Vertical Line
1111101	125 7D	253 FD	} Closing brace
1111110	126 7E	254 FE	Overline (Tilde)
1111111	127 7F	255 FF	DEL Delete/Rubout

Appendix E

CHECKLIST & REFERENCE

Configuration **DEFAULT**

Name

Service name

ID No

Password

Logon Sequence

LINE

Speed **1200/75**

No. Bits **7**

Parity **Even**

No. Stop Bits **1**

Handshake **None**

PHONE

Number

Modem Type **In/MODEM**

APPLE

COMMS Slot **2**

Type **NetComm**

Printer Slot **0**

Type

Speed

Stop bits

Init String